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CHARLES R. HOFFER

The Development of Rural Sociology*

Rural sociology came into existence in response to a need for understanding the conditions and problems of rural life. The early textbooks in the subject emphasized a wide variety of social problems in rural areas, but the main topics in these, and in the later textbooks as well, dealt with population composition and population change, the influence of occupation (farming), group relations, and rural social institutions.

Research in rural sociology has evolved through various periods of development. They are: (1) the pre-Purnell period which ended in 1925, (2) the depression period in the nineteen-thirties, (3) the war period, and (4) the postwar period. The latter period is characterized by more intensive research in various areas and by the addition of new areas such as social action and the socioeconomic aspects of farming. Extension work in rural sociology is increasing in importance. In addition to work in conferences and short courses, consultation with community leaders and extension personnel is becoming an important part of rural sociology extension. In many ways extension work is in the vanguard of all work in rural sociology. This is illustrated by rural development programs in the United States and by community development programs in foreign countries.

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LIKE all sciences, rural sociology developed in response to a need. It is an elementary fact in the realm of scientific thought that a new science comes into existence whenever phenomena confronting the human mind are not, or cannot be, understood satisfactorily by the existing disciplines or sciences. So it was with rural sociology. In order to gain an understanding of this matter and its implication for the future, it may be well to indicate briefly some ideas which were prevalent at the time rural sociology emerged as a special discipline to consider the problems of rural life.

People were concerned about the drift of population to the cities.

*Presidential Address, Rural Sociological Society, August 25–27, 1960, Pennsylvania State University, University Park, Pennsylvania.

Those with more pessimistic outlook predicted the ultimate deterioration of the countryside and a scarcity of food. City residents praised life in the country but carefully avoided it. Still others wondered why dwellers in city tenements did not seek a livelihood in the country. Macadamized roads, telephones, rural free delivery, and motion pictures at schoolhouses would, it was thought by rural enthusiasts, make farm life satisfying and rural people happy.

Dates or origins in the realm of ideas are difficult to determine, but exact dates are not necessary. Approximations serve quite adequately in discussions of this kind. Hence, one may take the publication in 1911 of the report of the Country Life Commission appointed by President Theodore Roosevelt as a beginning point for thinking about many problems which eventually came within the purview of rural sociology. Of course, there was considerable thinking and writing about the problems of rural life prior to the publication of the report. The Commission report was comprehensive in nature. It emphasized, however, certain deficiencies in country life: disregard for the inherent rights of land workers, the need for highway improvements, agricultural labor, health in the open country, and woman's work on the farm. It also contained some corrective measures that, in the words of the report, "should be set in motion to correct these and other deficiencies which might be present." This publication stimulated general interest in and discussion of rural life. Partly as a consequence of this interest and discussion, rural sociology emerged and problems of the rural population became the chief focus of attention of scholars who were interested in the subject.

But rural sociology did not develop easily. There was a general belief in the early decades of the present century that if the economic well-being of farmers and other rural dwellers could be improved. the social problems confronting rural people would be, or could be, solved. This belief, which was held by some social scientists and rural leaders, was a major deterrent to the development of rural sociology. On the other hand, many sociologists and rural life leaders who comprehended the nature of social processes and social change did not accept this view. They understood that social and cultural factors were also important and had to be considered. Thus rural sociology in its emerging stages drew its chief support from generalizations in general sociology, rural economics, and, to some extent, from social philosophy.

TEXTBOOKS AND TEACHING

It is therefore logical that the early textbooks in rural sociology should emphasize problems enumerated in the Country Life Commission report. Among the earliest books with the words "rural

sociology" in the title one may cite *Constructive Rural Sociology* by John M. Gillette, Professor of Sociology at the University of North Dakota,[1] and *Introduction to Rural Sociology* by Paul L. Vogt, then Professor of Rural Economics and Sociology at Ohio State University.[2] Gillette maintained that the attention being devoted to rural problems was one of the best proofs of the importance of rural sociology. He then proceeded to discuss under appropriate chapter headings the following subjects: distinction between the rural and urban community, physical conditions in the United States and agriculture, rural and urban increase, the advantages and disadvantages of farm life, and the business side of farming. These were followed by chapters on agricultural production, rural social institutions, and selected social problems like health and sanitation. Charity and corrections were also considered in separate chapters. The emphasis throughout the book was on the problems of improving rural life. Gillette was careful, however, to point out that rural social problems did not exist because of rural deteriorations; he recognized that there had been no deterioration. In fact, he maintained that progress had been made. The rural problem was really one of improvement on a more rapid and universal scale. It was assumed, however, that rural in comparison to urban life was inferior in many respects.

Vogt's book contains a total of twenty-eight chapters. They pertain to a wide variety of subjects including the land question and rural welfare, the farmer's labor income, movements of population, rural health, the rural social mind, rural morality, the school as a factor in rural life, the church and country life, several chapters pertaining to the village, and so forth. Perhaps one could best describe this selection of chapters and the method of presentation as eclectic. There is a definite tendency to be descriptive, with emphasis on the effects of social change on rural life. The texts by Gillette and Vogt did much to stimulate the introduction of courses in rural sociology in colleges and universities in the United States, including teachers' colleges and some theological seminaries.

Since the books by Gillette and Vogt were published, many texts in rural sociology have been printed. In all of them the same or similar topics appear: population and population change, rural and urban differences, and chapters on the various social institutions. But one can note a decrease in chapters on subjects tangential to sociology or subjects primarily of a problem nature. More and more the subject matter deals with population composition and population change, the influence of occupation (farming), group relations, and rural social institutions.

[1]New York: Sturgis and Walton Co., 1913.
[2]New York: D. Appleton Co., 1917.

The chapter headings in three recent texts selected more or less at random from a much larger number will illustrate the trend.[3] One so selected is *Rural Sociology* by Lowry Nelson.[4] This book starts with a chapter on concepts and methods in rural sociology, a topic which is absent from the early texts. This chapter is followed by one entitled "Characteristics of Rural Life." Next comes Part II, entitled "The Physical Environment and Spatial Patterns of Rural Life." Part III, dealing with population, has two chapters. Part IV has five chapters pertaining to social interaction in the rural environment. Then comes Part V, entitled "Rural Social Institutions," with a total of fourteen chapters, or more than half of the volume. The second text examined from the point of view of this discussion is by J. H. Kolb and Edmund deS. Brunner.[5] Like the preceding volume, their *A Study of Rural Society* starts with an explanatory chapter; the title they use for it is "What Is Rural Society—Why Study It?" It is clear from this chapter that these authors believe that rural sociology should deal with the human side of agriculture—living the good life, as they say. In other words, they consider that rural sociology deals with rural society and how the members of that society live. This involves a study of its people (population), its institutions and groups, its wealth, and its policies. After the introductory chapter comes Part I, with four chapters dealing with the distinguishing characteristics of rural people. Part II is entitled "Making a Living in Rural Society" and has five chapters. Part III has six chapters dealing with group relations, including rural-urban relationships. The fourth and last part has a total of ten chapters which consider institutional arrangements. The approach in this text is consistently sociological even when traditional economic topics are considered. Perhaps this is most clearly illustrated in a chapter entitled "The Social Functions of Land." Here the familiar topics—taxation, credits, and the social uses of land—are considered from the standpoint of their social significance and implications. There is little direct reference to rural problems as such in this text.

The third book to be discussed here is *Rural Sociology: The Strategy of Change* by C. P. Loomis and J. Allan Beegle.[6] This book departs from preceding ones in introducing and utilizing the social system concept. This concept is used throughout as the focus for the discussion and the presentation of data. As one reads the various chapters, however, it is interesting to find that the various topics so generally considered in other rural sociology texts appear. The main departure from preceding texts is in the conceptual framework and method of

[3]Textbooks in rural sociology now number about thirty. See Olaf F. Larson, "The Role of Rural Sociology in a Changing Society," *Rural Sociology*, 24, (1959), 3.

[4]New York: American Book Co., 1948.

[5]New York: Houghton Mifflin, 1952.

[6]New York: Prentice-Hall, 1957.

treatment. Such topics as locality systems (community), family and kinship systems, informal groups, farming systems, religious social systems, educational social systems, governmental systems, farmers' organizations as social systems, social systems in health, and federal agency systems are duly considered.

With the increase of research one may expect that the scientific characteristics of texts will continue to improve as time goes on. The treatment of the subject matter will become more abstract and concepts will be refined. However, abstractness may be carried too far. The strength in rural sociology has been the fact that it has dealt with problems of social adjustment and social change. If the subject matter becomes so esoteric that it loses a reasonably clear connection with the conditions and processes in rural life, it will cease to be the vital subject that it now is in the explanation and interpretation of rural life.

So much for the development of textbooks. Information is not available to indicate the extent to which rural sociology is taught in the various colleges and universities. It is fairly clear, however, from scattered sources of evidence that rural sociology is taught in many colleges and universities of the United States and that some of the content is included in courses like rural education which are not designated as rural sociology in the course offering. Larson reported recently in his discussion of rural sociology that "at the state level, in the land-grant colleges and universities at least 16 have a separate department of sociology or rural sociology with research or extension functions; in 16 more, sociology is combined with another discipline."[7] Thus it seems clear that rural sociology has gone through its trial periods and is well established as one of the social science disciplines.

While these developments are encouraging, it must be recognized that rural sociology has not yet attained a status comparable to general sociology or even to some other specialties in the field such as, for example, social psychology. Some graduate students who willingly and enthusiastically work on problems in rural sociology prefer to be identified with general sociology rather than rural sociology, and undergraduate students do not consider rural sociology as desirable as many other sociology courses. One can only surmise why this is so. The fact that general sociology is more generally established as a core discipline may be one reason. The newness of rural sociology is another factor. The identification of the subject in the minds of students with the farm population, which is decreasing, may also be a retarding factor.

These difficulties are not basic difficulties and not all of them are peculiar to rural sociology. The existence of any discipline is deter-

[7]Larson, *op. cit.*, p. 2.

mined ultimately by its usefulness in helping people to understand the phenomena with which it deals. In this respect the future of rural sociology seems assured. The offering of courses in rural sociology is being continued in most departments in which it has been introduced. Research programs are expanding. The Rural Sociological Society is increasing in membership. Also, it is interesting to note that there has recently been organized a European Rural Sociological Society which will soon hold a second European Congress of Sociology. The organization of this society by social scientists who live in countries much older than the United States suggests that contributions of rural sociology will be in demand in the United States for a long time in the future. It may be mentioned in this connection, too, that the pioneers in rural sociology in the United States—such leaders as J. M. Gillette, Paul Vogt, C. J. Galpin, K. L. Butterfield, Warren H. Wilson, and others—never doubted the importance or permanence of rural sociology.

RESEARCH

Anyone who proposes to present a discussion of the development of research in rural sociology has a great advantage in having the excellent monograph, *The Growth of a Science,* by Edmund deS. Brunner.[8] It is significant that after a descriptive chapter on the early (pre-Purnell) period of rural sociological research, Brunner uses as chapter titles subjects which appear in most rural sociology texts; "Community Studies," "Population," "Social Institutions," "Rural Social Organizations," "The Sociological Aspects of Economic Problems and Regionalism, Suburbanism, Trends and Values." This selection indicates again that these topics constitute the core of rural sociology.

Brunner points out that up to 1956 more than a thousand known rural social studies have appeared as separate publications. He also indicates that there appear to be four fairly well-defined periods in the development of rural sociological research. The first was the period preceding the Purnell Act passed by the United States Congress in 1925. This act made possible, but not mandatory, the appropriation of a limited amount of money from the federal government to agricultural experiment stations for research in rural sociology. The second period covered the time from the passage of the Purnell Act until the great depression. The third period extended from the depression until the end of World War II. The fourth period began at the close of World War II and is still in progress.

For purposes of review and perspective, it may be advantageous to state briefly the characteristics of research in these various periods. In the pre-Purnell period, Brunner explains, rural sociologists were

[8]New York: Harper, 1957.

under heavy pressure to demonstrate the utility of their offerings. In this endeavor they were handicapped by the naive notion of most of their colleagues that if the economic status of man could be improved all other social desiderata would follow as a matter of course.[9] This assumption is now rarely heard and never considered seriously, but at that time it was an obstacle of considerable significance. Subsequent research has amply demonstrated that this notion was fallacious. Level-of-living surveys of farm families made by E. L. Kirkpatrick[10] and others did much to dispel it. These and other studies proved that the relationship between level of living and income or economic well-being was not a constant one. It was shown conclusively that level-of-living depended upon many factors of a social nature besides income.

Most of the research during the pre-Purnell period consisted of surveys of communities. Interest in rural life tended to focus on the community because its importance in the social well-being of rural people was readily recognized by persons who were interested in rural life. Most of these surveys were presentations of facts and figures about different aspects of community life. It was apparently assumed that the discovery of facts about community life would be sufficient evidence and justification for programs of improvement or amelioration. It was during this period that many church and community surveys were made under the direction of Warren H. Wilson.[11] At this time, too, a number of economic and social studies appeared, mainly in North Carolina and South Carolina. These surveys contained U. S. Census and other data on the economic and social life of each county studied. It was during this period that C. J. Galpin made the now famous studies in Wisconsin to determine the extent and nature of trade areas of a town and to conclude that the town and its adjacent trade areas constituted the actual, if not the official, human community.[12] Thus the pre-Purnell period, through exploratory effort, demonstrated the existence and general nature of social factors in rural life.

In the second period extending from about 1925 until the Great Depression, research in rural sociology was characterized mainly by a continuation of the point of view in the pre-Purnell period, though some new tendencies may be noted. One was the use of the case study method. By case study is meant a more intensive study of a social unit (usually a community) than would be undertaken by the survey approach, for the purpose of the case study method is not only to show what social factors are present but how they are interrelated.[13]

[9] *Ibid.*, p. 5.

[10] *The Farmer's Standard of Living* (New York: Appleton-Century, 1929).

[11] Brunner, *op. cit.*, pp. 7–8.

[12] *The Social Anatomy of an Agricultural Community* (University of Wisconsin Agr. Exp. Sta. Res. Bull. 34, Madison, 1915).

[13] Examples of studies of this type which might be cited are: W. G. Mather, Jr.,

The Waterville, New York study tended to show the interrelation of the different aspects of community life. The books, *Our Rural Heritage and the Expansion of Rural Life* by James Michael Williams, describe in great detail the range and extent of rural attitudes. Hoag's study of Bellville, New York demonstrated the role of the community in contributing migrants to urban life—in this instance a remarkably positive contribution, for many of these individuals became famous in education, in professional pursuits, and in the business world. The community maintained standards in education and in social life that were far in advance of the usual or average community. These characteristics of the community seemingly accounted for the high quality of its migrants. It seems strange that rural sociologists have not made similar studies of communities in other states, for such studies throw much light on community life and migration from rural areas to the city.

The third period, extending from the beginning of the depression until the end of World War II, was influenced by the two great social upheavals which formed its boundaries. Much of the research done during the period of the depression was of a survey nature, concerned with the extent and nature of relief needs and socioeconomic characteristics of the recipients of relief. These studies kept rural sociology in existence in the agricultural experiment stations and elsewhere, but the advances in neither methodology nor conceptualization of the subject during the depression period were outstanding, though there were some exceptions.

During the war period, the research was limited in scope and was directed mainly to showing how rural people were adjusting their family life and farm activities to contribute to the war effort.[14] Research in this period was curtailed to a considerable extent. The major purpose of much of the research was to make a contribution to the war effort.

With the end of World War II the fourth period began and it is still in progress. Hence we may consider it in more detail. It is a matter of conjecture now to state what the history of the future will show to be characteristic of this period in relation to either content or method. Certainly, though, research efforts will be increased in variety and content. Surely population studies will continue. There

A Study of Rural Community Development in Waterville, New York (Cornell University Agr. Exp. Sta., Ithaca, 1934); W. A. Anderson, *Social Change in a Central New York Community* (Cornell University Agr. Exp. Sta. Bull. 907, Ithaca, 1954); James Michael Williams, *Our Rural Heritage and the Expansion of Rural Life* (New York: Knopf, 1925); and Emily Hoag, *The National Significance of a Single Farm Community* (U. S. Dept. of Agr. Bull. 984, Washington, 1921).

[14]See, e.g., Charles R. Hoffer, *Adjustment of Michigan Farm Families to War Conditions* (Michigan State College Agr. Exp. Sta. Spec. Bull. 333, East Lansing, 1945).

is no evidence of the total disappearance of the rural population or of absence of population changes. Although the farm population may be decreasing, no one predicts that it will disappear or that information concerning other segments of the rural population will not be needed.

The decrease of the farm population in recent decades has caused much concern regarding the future of rural sociology.[15] There has been a tendency to equate "rural" with "farm" and thus to conclude that the importance of rural sociology diminishes accordingly. Such a view is unwarranted. Even though smaller in numbers, the farm population has not decreased in importance. It must still perform the basic function of producing food for other segments of the population. Also, the term "rural" includes much more than farm population. Towns, small cities, and the ever-increasing rural-urban fringe areas logically and actually come within its purview. "People do and will live in the country and in smaller centers in large numbers."[16]

Likewise, research studies of the community will be increased in range and extent. Not only will research regarding the structure and function of modern communities be necessary as they respond to ecological and cultural forces, but studies of social action at the community level will be needed. Research about structure and function needs to be supplemented by research dealing with social action in this area. It is necessary to know what conditions and circumstances are associated with successful endeavors, or, to express the same thought in another way, why some worthy plans or programs of social action succeed and others fail. Such information is crucial for all kinds of programs designed to improve community well-being. The usefulness of action research has great appeal to extension workers, adult educators, and persons concerned with community development.

Other areas have been or are likely to become the focus of research effort. There has already been a marked development in health and health care, and research in this field will probably be carried much further. Social organization for health care, for example, is a fertile field for investigation. The attitudes and values people have regarding health are also important areas of research. A considerable amount of research in rural social organization has been done, but in all probability this area will be developed to a much greater extent in the future. Studies of the adoption of farm practices have made a good beginning, but research in this area will be greatly expanded in both range and intensity of analysis. Rural labor is still a neglected area but is increasing in importance and merits more research effort.

There is no question about the need for studies of the socioeconomic aspects of farming and agriculture, as was so emphatically explained

[15]See, e.g., Harold Hoffsommer, "Rural Sociological Intra-Disciplinary Relations Within the Field of Sociology," *Rural Sociology*, 25 (1960), 175–196.

[16]Larson, *op. cit.*, 8.

in the recent paper by Earl O. Heady and Joseph Ackerman.[17] The role of agriculture and farming in the modern industrial era needs to be described and analyzed. Studies of decision making as it relates to farm and community action as well are likely to become an important area of research in the future. Norms, influence, reference groups, and other sociological concepts will be useful in this research.[18] Special studies of social institutions like the school and the church are needed to describe and analyze their adjustments and needs as social change occurs. The nature and effects of mass communication media constitute a new and important area of investigation.

Perhaps enough has been stated in the above paragraphs to suggest that research will continue to be in the future, as it has been in the past, an important branch of rural sociology. The Purnell Act furnished a continuous, albeit a limited, source of research funds for agricultural experiment stations. Now this act has been succeeded by the Hatch-amended Act and the Agricultural Marketing Act. Thus there is at least the possibility that funds for research at agricultural experiment stations can be increased. Moreover, there is a greater possibility of funds from other agencies of government and from foundations than has existed in the past.

It is perhaps hazardous to comment on methodology in research in this paper, for methods must always be relative to the nature and purpose of the research being done. Hence, surveys may be very useful at times as, for example, in undeveloped countries or in the investigation of special problems such as studies of the aged in our own society. On occasion case studies will be useful. Sociometric techniques and, of course, statistical methods will continue to play an important role in rural sociological research.

The emphasis in rural sociological research and in other areas of the discipline has been on problems or questions of a practical nature. From time to time there has been a tendency to question this emphasis. It has been mentioned in numerous presidential addresses to this society with the warning that if this emphasis is continued without regard to theory there is danger that rural sociology will cease to be a discipline in its own right. It is easier, however, to state the danger than to offer a solution. Frequently there has been a tendency to admonish rural sociologists to change the emphasis—to become more abstract, to work on fundamental problems—and thus to develop the discipline. Somehow this suggestion seems not to have been carried out in a far-reaching manner. The reason is clear: of necessity rural sociology is rooted in problems of a practical nature and will probably

[17]"Farm Adjustment Problems and Their Importance to Sociologists," *Rural ociology*, 24 (1959), 315–325.

[18]Charles P. Loomis, Discussion of Heady and Ackerman, *op. cit.*, *Rural Sociology*, 24 (1959), 327.

continue to be or it will not exist at all. What is the wisest course to follow? It seems logical that, although we continue to study practical problems, they should be related to the greatest possible extent to fundamental or general principles which are current in general sociology. A particular instance may be cited.[19] The author's research study arose from the practical question put by the director of an agricultural experiment station. "Why don't the Dutch celery growers spray their celery to prevent blight, since it has been demonstrated beyond the question of reasonable doubt that this is an economical practice?" The answer to this question led to a consideration and use of the concept of culture and this in turn helped to explain the reluctance of the growers to apply spray to their celery crop. Subsequent studies of the adoption of approved farming practices have utilized the concept of culture diffusion with great effectiveness. Of course, some concepts which are mainly ecological in nature, like the neighborhood and the community, have been used in rural sociology since its beginning, and concepts like social institutions and social organization have been used for a long time. Concepts like social system is now being widely used.[20] There is no lack of concepts in general sociology which are useful for research and analysis in rural sociology.

The need for relating research material of a descriptive nature to concepts and theories is ever present. Many rural sociologists seem to have been neglectful of this need. As Brunner has commented, "As one examines them [studies in rural sociology] one after another the wonder deepens that the author did not state explicitly the evident hypotheses, summarize his quantitatively stated conclusion in a conceptual phrase, or indicate briefly that this or that finding agreed with, modified, or raised questions about theory *x*, *y*, or *z*."[21]

There are no insurmountable difficulties or problems in the development of research in rural sociology or in relating it to sociological principles. Much research in rural sociology will necessarily be descriptive in nature, but much of it will also involve questions of a fundamental nature and will require a high degree of theoretical orientation. The trend will be for more emphasis on conceptualization and theory, but so-called practical studies will not disappear.

EXTENSION

The third branch of rural sociology to be considered in this paper is extension. In a few states,[22] extension has been an integral part of

[19]Charles R. Hoffer, *Acceptance of Approved Farming Practices Among Farmers of Dutch Descent* (Michigan State University Agr. Exp. Sta. Spec. Bull. 316, East Lansing, 1942).

[20]Loomis and Beegle, *op. cit.*, pp. 3–7.

[21]Brunner, *op. cit.*, pp. 151–152.

[22]New York, Ohio, and Wisconsin are examples.

rural sociology for a long time. This phase of rural sociology has gradually expanded so that "today 27 states have extension specialists in Rural Sociology or Community Organization."[23] Such general acceptance of rural sociology in the Agricultural Extension Service of the United States indicates that the subject fulfills an important need in extension programs.

What do workers in sociology extension do? Kolb and Brunner provide a succinct answer:

> Extension sociologists deal with problems of developing methods of social organization and leadership for reaching maximum numbers of rural people with ever-enlarging extension programs, with community organization and development, with assistance to rural social institutions and agencies, with improving procedures of existing organizations and with developing groups and group discussion methods.[24]

Edward O. Moe states the purposes of extension work in rural sociology in a more formal manner:

> (1) Teaching the clientele: Extension staff and selected organization and community leadership.
> (2) Consultation—the clientele: the Extension staff and selected organization and community leadership.
> (3) Research—both evaluative program and basic sociological research.
> (4) Preparation of Extension publications—utilizing sociological subject matter and designed for practitioners, both professional and volunteer.[25]

It is clear from the above quotations that extension work in Rural Sociology, like all extension work, is concerned with the application of sociological knowledge to the work of a complex system of adult education. Such application requires not only a thorough knowledge of sociology but also the ability to interpret and apply such knowledge to problems which confront people as they strive to make life more satisfying and meaningful. In essence, extension work is a form of teaching but in situations which place high demands upon the instructor.[26]

The types of activities in extension are stated in general terms in the above quotation by Kolb and Brunner. The activities involved vary greatly. In the beginning itinerate lecturing about community and social problems was a common practice in extension work. In-

[23]E. J. Neiderfrank, *Newsletter to State Extension Specialists in Rural Sociology and Community Organization* (U. S. Dept. of Agr., Washington, January 1960).

[24]J. H. Kolb and Edmund deS. Brunner, *op. cit.*, p. 344.

[25]Unpublished manuscript.

[26]E. J. Niederfrank, *Newsletter to State Extension Specialists in Rural Sociology and Community Development* (Washington: U. S. Dept. of Agr., January 1960). "Of the thirty persons engaged in extension in the United States, twenty-four have the Ph.D. degree, and about ten other sociologists with this degree are engaged in extension studies."

structive as this method may have been, however, it was an isolated effort and hence did not produce results that were cumulative. Another method which appeared early in extension programs was participation in conferences and short courses. This approach was an improvement over itinerate lecturing and gradually led to another role of the extension worker in rural sociology—consultation. Consultation has developed mainly in two areas: (1) consultation with community and organization leaders and (2) consultation with other extension personnel. Each of these methods is important and has its rightful place in extension programs. Which method or combination of methods shall be used is subject to time, place, and other circumstances. Consultation, however, has become increasingly important for, as Larson has pointed out, sociology deals with group phenomena.

> On the whole the consumer of sociological knowledge is not the individual farmer or farm homemaker or the rural resident family. Rather the consumer public is made up of the leaders of the organizations to which rural people belong, the professional workers in the several social systems who work directly with rural people, and policy makers and administrators at all levels of government.[37]

Such a role places the extension sociologist in the very center of the extension programs, and if he performs his role well he becomes in fact a central figure in the process of organization, planning and evaluation and in community development. As this role is effectively demonstrated, extension specialists in other fields will, in increasing number and frequency, consult the rural sociologists. The acceptance of this function of rural sociology extension is an important step forward for rural sociology in general, for it negates the assumption that because rural sociology does not always have a direct application to the farm or to the family on the farm it is not practical.

In many ways, the extension branch of rural sociology is the vanguard of all work in rural sociology. This is well illustrated in the current emphasis on rural development programs in the United States and in community development programs in foreign countries. In these programs, the main emphasis is on helping people to understand scientific methods of farming and community development and to aid them in achieving these goals through the interpretation and application of sociological information. This work will in all probability develop greatly in the future as more and more countries actively engage in programs of rural development.

The distinction between research and extension which has so generally existed will likely not be warranted in the future development of rural sociology. As the role of the extension worker as a consultant increases, extension and research, at least on the action level, will be

[37] Larson, *op. cit.*, 8.

drawn closer together. Extension will delineate the problems recognized as practical and sociologically important by extension workers and by the public, for functionally extension is concerned with the identification and analysis of significant problems confronting the farm, the home, and the community and planning courses of action to meet these problems.[28] Surely studies of social change will receive high priority. Policy questions and organization planning and program evaluation will also be judged as important.

It thus becomes evident that extension is an integral branch of rural sociology, and that it has an important place in the agricultural extension service in the various states. Its development there tends to bring the subject to the attention of administrators and the public. As a result, the nature of rural sociology in its research and teaching aspects becomes better understood.

SUMMARY

The future development of rural sociology looks very promising. Social change and social trends are in its favor. The trend in social thought is toward the use of science in the understanding of social change and social adjustment. The changes which are occurring in rural life in the United States and elsewhere in the world are so far-reaching and complex that the public will demand more and more sociology rather than less as it endeavors to understand them. This condition is as true in the rural field as in other segments of contemporary society. The intermingling of farm and nonfarm population in a rural setting, as well as other population changes, creates many situations which need to be understood. By both tradition and logic, studies of these situations come within the purview of rural sociology. Likewise, the changes in agriculture itself have many social consequences. The trend toward mechanization and larger farms are examples of current changes. Part-time farming constitutes another important trend.

The increase in enrollments in colleges and universities throughout the United States is practically certain to be reflected in increased enrollments in courses in rural sociology. Likewise, the greater emphasis on social research in general will be reflected in more financial support and greater effort in rural sociological research. Extension work in rural sociology, as we have shown, is rapidly becoming an important part of the total extension service. As such it is bound to increase in extent and importance. For rural sociology as a social science discipline the statement "The present is big with the future" aptly applies.

[28]Edward O. Moe, "Extension Education," *Encyclopedia of Educational Research* (3rd ed.; New York: Macmillan, 1960), p. 491.

RAY E. WAKELEY
and MOHIEY ELDIN NASRAT

*Sociological Analysis of Population Migration**

Research was designed primarily to test the usefulness of conceptual variable analysis in a study of rural migration and to explain migration in terms of sociological theory. Cohesion and deprivation were the concepts selected and an inverse relationship was posited. Counties were treated as social systems. Net rural migration, a form of withdrawal behavior, was used as a negative measure of cohesion. Three measures of deprivation were developed and used. Two of these measures were significantly correlated with net migration and the theoretical formulation was supported to the extent indicated by the analysis. Presentation of results is followed by a critique and consideration of other theoretical and practical possibilities for migration research which can be explored by the use of conceptual variable analysis.

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POPULATION migration is here considered as the movement of persons or other social units, such as families, from one place of residence to another place of residence, involving at the same time a change from the social system of origin to the social system of destination. In this analysis the concept of the county as a place of residence and as a social system is basic to the definition of migration. Few studies have attempted to make a sociological analysis of migration in terms of sociological concepts and the theoretical relationships between them. Analyses of the data of migration, put in a sociological framework to test theoretical relationships between concepts measured by

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continuous variables, would have broader application to the problems of migration. Such analyses would permit greater generalization of results and might contribute to the development of general theory.

The general objectives of this research were (1) to illustrate the application of the method of conceptual variable analysis in a study of population migration and (2) to explain and attempt to predict net migration by the use of a theory of human relationships.[1] This research was designed to use a conceptual variable analysis to test a sociological theorem by the use of data on population migration. Conceptual variable analysis is not a new technique. It may be traced from Durkheim and a number of scholars, including Merton and Northrop, who have modified or elaborated it.[2] Hamblin has written a useful description of the method, from which the authors decided to use it in this study of migration.[3]

Serious consideration was given to the selection of concepts which were considered applicable to migration studies. Cohesion was chosen as the general social systems concept to serve as a dependent variable in this study. This choice followed from a consideration of Durkheim's use of the concept of cohesion in his studies of suicide. That is, migration from the system is here recognized as a kind of withdrawal behavior, but one which is much less drastic in its personal consequences and much more common than egoistic suicide. Cohesion in this study was defined as the degree to which units of a social system accept the roles prescribed by the system. In this context roles are the expected behaviors of units of the system. It is recognized that prescribed roles are not accepted on an all-or-none basis and that the degree of acceptance is a negative measure of migration proneness which, if accentuated, leads to migration, which is a common form of withdrawal from the system.

Deprivation was the concept chosen as an independent variable to relate to cohesion. Deprivation in this study was defined as the degree to which achievement expectations exceed achievement actualities. Technically, this should be considered relative deprivation. The more a condition of deprivation exists, either within the system or by comparison with other systems, the greater the likelihood that units will withdraw. A conceived total lack of opportunity for units to achieve within the system may be considered forced migration when applied to withdrawal from farming. No attempt was made to measure forced migration in this study.

Anomie was considered first as the independent conceptual variable

[1]Mohiey Eldin Nasrat, "Conceptual Variable Analysis of Rural Migration in Iowa" (Ph.D. thesis, Iowa State University, 1958).

[2]Emile Durkheim, *Suicide* (Glencoe, Ill.: The Free Press, 1951), pp. 145–240.

[3]Robert L. Hamblin, "An Approach for Building General Theory in Sociology" (paper read at the annual meeting of the American Sociological Society, September, 1956).

to be related to cohesion in this study. It was discarded, partly because of the difficulty of arriving at a definition which would be precise enough to permit exact measurement, but mostly the concept of deprivation appeared to be more adequately measured by economic data, to the use of which this analysis was arbitrarily limited by the authors.

Cohesion and deprivation are widely recognized social system variables which can be used in the analysis of any or all social systems. A choice of units or systems was forced on the researchers making this study by the limited availability of measurement data. Data on net migration were available for counties rather than for smaller units. They were available for populations rather than organizations. The same limitations characterized the economic data used in this study. The necessity for the decision to treat counties as social systems was definite and quite rigid in its limitations.

The scientific basis for considering counties as social systems rests on a number of social characteristics which apply to counties. A county is a legal entity with a name. Membership in the county may be considered to be based on meeting legal residence requirements, being accepted as a voter, and playing county roles. Residence units are required to pay taxes for the support of the county services used by county residents. Residents of a county are governed by county officials, belong to county-wide organizations, and participate in county activities. They avail themselves of county welfare services, build and use systems of county roads, support and patronize the county unit of the agricultural extension service. In so-called one-town counties, the town which is usually the county seat is the recognized center of dominance in the county. As the center of dominance, it sets the pace for competitive activities which determine boundary limitation and maintenance for those activities the boundaries for which are not jurisdictionally determined. Counties obviously show social system characteristics in varying degree, but under the conditions noted no excuses need to be made for considering counties as social systems.

Net rural migration was used as a measure of cohesion. It appeared logical that rural migration, considered as withdrawal from a county system, was affected by characteristics of the total county system and also by comparison with other county systems. Net rural migration was expressed as the ratio between the net number of rural persons who entered or left the county during a given period of time and the number of rural persons residing in the county at the beginning of the period. In this study the net rural migration ratio was computed for the period 1940–1950 by dividing the net number of rural people who entered or left the county during that time by the total rural population of the county in 1940.[4]

[4]Paul J. Jehlik and Ray E. Wakeley, *Rural Urban Migration in Iowa, 1940–1950*

Three indexes were constructed to measure relative deprivation by the use of economic data: (1) a coefficient of variation, (2) a coefficient of deprivation, and (3) a coefficient of comparative rewards. Economic data were used to construct each of the measures because of the importance of economic factors in migration.[5] The plan of the study called for the use of income data, but income data were not available to construct the coefficient of variation and farm operator level-of-living data were substituted for income. It was recognized that the substitution of farm family data for county data introduced a new problem, the substitute of a farm part for the county whole. This choice was allowed to stand because of a strong interest in the possibility of using level-of-living data in studies of farm migration.

1. A coefficient of variation was developed as a measure of relative deprivation present within the system which might result in uncertainty or insecurity. The coefficient of variation was the degree of change in the farm operator family level-of-living index in the county for all known periods from 1930 to 1950.[6] This was used as a positive measure of deprivation; that is, the greater the variation, the greater the deprivation.

2. A coefficient of deprivation was developed as a measure of relative deprivation present within the system. The coefficient of deprivation is the difference between the per capita income within the system at the beginning and at the end of the period under consideration. This measure was obtained by computing the ratio of 1947 per capita income to the 1939 per capita income as a base. This ratio was used as a negative measure of deprivation within the social system; that is, the greater the increase in per capita income, the less the deprivation.

3. A coefficient of comparative rewards was developed as a measure of relative deprivation between systems. The coefficient of comparative rewards was the ratio of the per capita income within the system (county) to the per capita income outside the system (state) for the year 1947, which was the last year these income data were estimated for the state and its counties. This measure was used as a negative measure of deprivation; that is, the smaller the ratio of inside to outside, the

(Iowa State University Agr. Exp. Sta. Res. Bull. 407, Ames, 1954). The 1940 population was used as a base for the migration ratios because it was not affected by the 1940–1950 migration. For purposes of this study forward and backward projections were not available.

[5]Robert H. Johnson, *An Analysis of Iowa Income Payments by Counties* (University of Iowa, Iowa City, University of Iowa Studies in Business and Economics, New Series, No. 1, March, 1950).

[6]Margaret Jarman Hagood, *Farm Operator Family Level-of-Living Indexes for Counties of the United States, 1930, 1940, 1945 and 1950.* (Washington: U. S. Dept. of Agr., Bureau of Agricultural Economics, 1952). The coefficient of variation is the sum of the squares of the differences of each of the 1930-1950 scores from the mean of the four scores.

greater the deprivation. It is important to note that the first two indexes are measures of internal conditions while the third is an intersystem measure.

The research framework for this study can now be summarized:

1. Counties were accepted and treated as social systems.

2. In any social system, cohesion is related to deprivation and varies inversely with it. This is a general sociological theory expressed in terms of a logical relationship between sociological concepts.

3. Net rural out-migration was chosen as a negative measure of cohesion. Three coefficients were used as measures of deprivation: an index of variation which was used as a positive measure of deprivation, a deprivation index which was used as a negative measure of deprivation, and an index of comparative rewards which was used as a negative measure of deprivation.

4. The empirical hypotheses can now be stated as follows. The dependent variable—that is, the amount of net out-migration—is (1) directly related to the coefficient of variation, (2) inversely related to the coefficient of deprivation, and (3) inversely related to the coefficient of comparative rewards. These three empirical hypotheses were first used as independent tests of the general theory. After that analysis was completed, the predictive value of the three measures was tested in a multiple correlation analysis.

The analysis indicated that the relationships between net migration and each of the three independent variables were in the direction posited in the empirical hypotheses, and that the relationships between the index of net migration, the coefficient of deprivation, and the coefficient of comparative rewards were significant at the 5 per cent level and the 1 per cent level, respectively (see Table 1).

Table 1. Product moment correlation coefficients between the different variables for the 99 counties in Iowa

Variables	x_1	x_2	x_3
x_0 migration	0.0263	−0.2275*	−0.5332†
x_1 variation	———	0.2515*	0.2376*
x_2 deprivation	———	———	0.6016†
x_3 comparative rewards	———	———	———

*Significant at the 5 per cent level.
†Significant at the 1 per cent level.

Also the coefficients of variation, deprivation, and comparative rewards were significantly intercorrelated.

The rural-urban analysis indicated that the relationships between

the net migration index and the coefficient of variation was higher among the rural counties but was not significant either for rural or for urban counties (see Table 2). The relationship between net migra-

Table 2. Product moment correlation coefficients between the dependent variable and the three independent variables for rural and urban counties in Iowa

Variables	23 rural counties	76 urban counties
x_0 x_1	0.2213	0.0022
x_0 x_2	−0.1685	−0.2432*
x_0 x_3	−0.3903	−0.5748†

*Significant at the 5 per cent level.
†Significant at the 1 per cent level.

tion and the coefficient of deprivation and comparative rewards was significant for the seventy-six urban counties at the 5 per cent and the 1 per cent levels, respectively. These relationships were not significant for the rural counties.

Further breakdown of the urban analysis by size of the largest incorporated place in the county indicates that the relationships between net migration and each of the three independent variables were not significant for those counties classified as having urban centers with less than 5,000 or more than 25,000 population (see Table 3). For

Table 3. Product moment correlation coefficients for urban counties classified by size of the largest urban center

Variables correlated with net rural migration	Size of largest urban center: 2,500–4,999 (32 counties)	5,000–24,999 (31 counties)	25,000 and over (13 counties)
x_0 x_1	−0.0186	−0.2478	0.3298
x_0 x_2	−0.1760	−0.5213*	−0.0963
x_0 x_3	−0.2935	−0.5861*	−0.3954

*Significant at the 5 per cent level.

counties with centers having between 5,000 and 25,000 population, the relationship between net migration and the coefficient of variation was negative in direction, but the relationship was not significant at the 5 per cent level. The relationships between net rural migration and

the coefficients of deprivation and comparative rewards were both highly significant and in the expected direction. From this analysis it appears that the relationships for rural and urban counties are in the direction hypothesized. Those which are significant for the state appear to be significant principally because of the influence of the urban counties, especially those counties containing one or more incorporated places of 5,000 but not more than 24,999 population.

Multiple correlation analysis for the ninety-nine counties in Iowa indicated that nearly one-third of the variation in net rural migration could be accounted for by the combined influence of the three independent variables (see Table 4). These three variables showed greatest strength in predicting rural migration into or out of urban counties. They were weak in predicting rural migration for rural counties. The prediction equation for the seventy-six urban counties was $x_o = 31.5165 + 0.009{,}554x_1 + 0.036{,}867x_2 - 0.280{,}191x_3$.

Table 4. Multiple correlation between net rural migration and the three independent variables, for counties classified by population of largest center

Iowa counties			
Size category	Number	R	R^2
All counties	99	.5642	.32
Rural counties	23	.4865	.23
Urban counties	76	.6035	.37
Less than 5,000	55	.3431	.11
5,000–24,999	31	.6008	.36

Application of the prediction equation indicated some of the difficulties. Counties for which rural migration was poorly predicted included all five metropolitan counties. In two of them rural migration was greater than predicted while it was less than predicted in each of the other three. Both high and low level-of-living counties were included among those for which rural migration was greater than predicted. Counties for which rural migration was less than predicted were mostly counties which were located in a developing industrial area or had some other reason for rapid growth, such as a college or a lake resort area. Predictions of rural migration for rural counties varied within a relatively narrow range while actual rural migration rates varied more than the estimates.

Significant relationships, then, were found between the measure

of cohesion and two of the three measures of deprivation. The relationships were in the hypothesized direction. The size of the statistical relationships between the measurement variables was sufficient to give significant support to the empirical hypotheses. These results support the conceptualized framework but do not prove it. They do indicate ways in which these concepts may be used in setting up a research or an action program involving migration into or from a social system.

Many problems remain and a few of them are here mentioned briefly to indicate a range of considerations to be encompassed in other possible studies using conceptual variable analysis.

1. This study is limited to a social systems analysis. The concepts are systems concepts and the measures are system measures. The results are in terms of the net withdrawal of individuals as units of the system in response to intrasystem and intersystem characteristics.

2. The county system used in this analysis is not the only social system involved in migration. Smaller and larger communities and many institutionalized systems may be selected for analysis in relation to migration in or out of social systems. As hypothesized, withdrawal from any system would be a negative measure of cohesion within the system.

3. Cohesion is not the only concept which may be related to or measured by migration. The degree of integration and the presence of symbiotic relationships may also help to explain migration.

4. Acceptance of prescribed roles does not exhaust the group characteristics of cohesion. Role performance is also related to cohesion. Coming after acceptance of role, successful role performance would also be directly related to cohesion.

5. The acceptance of role implies the acceptance of the accompanying status. In the system of location, the person has a role status and a performance or prestige status. In the system of destination, the person has principally role status. Status factors need more intensive study in relation to migration.

6. Lack of role clarity and ambiguity of role expectations also affect cohesion and therefore migration. This is a problem for our communications people to investigate in relation to migration.

7. The measures used in this study are not the only possible ones and they may not be the best ones. Net migration is not the only significant form of withdrawal behavior.[7] Neither is withdrawal from the system the only measure of cohesion. It may be that differential participation within a system is a more significant measure of cohesion

[7]Rudolph Heberle, "Migratory Mobility: Theoretical Aspects and Problems of Measurement," *World Population Conference Proceedings* (New York: United Nations, 1954), 2, 527.

than withdrawal from it.[8] In other words, one might expect participation to be a significant negative measure of migration proneness as well as a positive measure of cohesion.

8. Economic measures used in this analysis are not the only measure of deprivation, and farm operator level-of-living indexes are much too stable to serve as an adequate measure of short-time variation. Level of living undoubtedly would be more useful when used as a measure of deprivation in terms of the trend of change within the agricultural system.

One need not wait for the complete empirical testing of such a logical system before beginning to apply it. Instead, let us apply it in a provisional way to the farm problem sometimes called agricultural adjustment. This is directly related to the present analysis, because increased migration out of farming has been proposed as one of the adjustments most needed.

Note that cohesion is inversely related to deprivation and anomie. Therefore, anomie is directly related to deprivation. Now it has been reported that midwest farmers are becoming frustrated about farm programs, that they do not know what course to follow, that they do not believe the problems of agriculture can be solved in any organized way. This is evidence of increasing anomie in the occupational system known as Corn Belt agriculture. Increased anomie means decreased cohesion. Evidence of this might be an increased reluctance of farmers to work together. So the farmers revert to their former independence, and every farmer tries to see how much he can produce on an individualistic competitive basis. Decreased cohesion results in increased migration out of the farming system. At this point relative deprivation enters the picture. As with decreasing cohesion farmers migrate, so with decreasing deprivation cohesion is increased and farmers stay. It is a fact that, other things being equal, fewer farmers and larger farms in agriculture mean increasing average income within the system. This decreases deprivation, which increases cohesion and decreases migration. Thus success in farm consolidation and doubt concerning the success of farm programs work against each other. Migration would be expected to become precipitous only if anomie and deprivation both increased and so decreased cohesion precipitously. Precise empirical researches are needed to develop the usefulness of this theory.

[8]John Harp, "A Discriminate Analysis of Urban Attitude Toward Consumer Co-operatives" (Ph.D. thesis, Iowa State University, 1958).

RICHARD A. KURTZ
and JOEL SMITH

*Social Life in the Rural-Urban Fringe**

Since investigators have tended to confuse suburban with fringe social life, and since it is possible that contemporary descriptions of the fringe area have been influenced by pro-rural biases, a study was undertaken to determine the identification and integration patterns of residents in an area which is clearly a rural-urban fringe. It was found that long-time, relatively stable residents, who have rural, non-central city backgrounds and who are committed to the area, participate in their locale to a greater extent than residents who possess converse characteristics. This means that farmers, who have been largely neglected in other fringe studies, tend to be the area participants. In addition, very few sample members may be classified as negatively identified with their area of residence. This finding is not in agreement with the conclusions other investigators have presented.

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STUDIES of the character of social organization in the rural-urban fringe, and the significance of such residence for fringe dwellers, have become quite common sociological preoccupations. From the point of view of quantity, another such study hardly seems needed, given the alternative subjects on which sociologists might fruitfully focus attention. However, two major considerations suggest that further investigation of the subject may be necessary. (1) Previous investigations of adjustment and integration of rural-urban fringe residents have been conducted indiscriminately in both suburbs and fringes despite the fact that the differences between these two types of settlement areas may have significant consequences for both the integrative mechanisms and the adjustment processes that are possible.[1] (2) Almost uniformly,

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[1]For an elaboration of the significant ways in which these two communal types

studies describe fringe areas as institutional deserts, lacking in organization, inhabited only by unintegrated isolates and disgruntled old-timers.[2] Fringe dwellers are characterized as *in* but not *of* their residential areas.[3] Inquiries concerning where fringe dwellers do participate and identify have not been pursued after the discovery that it is not in the area of residence. The question is still important, however, and the answer seems to be that fringe dwellers participate in, and identify with, the central cities which exercise economic and social dominance over the area.

In general, descriptions of the social life of fringe areas have been quite similar to earlier stereotyped pictures of city life that are now no longer held.[4] In both cases, a lack of integration and identification has been emphasized.[5] In view of the similarities, it is possible that contemporary images of fringe socal life may be affected by the same pro-rural biases that seem to have influenced urban stereotypes in

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vary, see Richard A. Kurtz and Joanne B. Eicher, "Fringe and Suburb: A Confusion of Concepts," *Social Forces*, 37 (1958), 32–37.

[2]These conclusions strikingly resemble older pictures of urban social life that deflected research from questions concerning identification with and integration into the city. Only recently has it been realized that such a view of the city can account for neither its success nor its persistence; that the differences between urban and rural may result in different mechanisms and manifestations of integration and identification rather than in their virtual absence. For examples of recent research which emphasize the presence of urban integration and identification see: Robert C. Angell, "The Moral Integration of American Cities," *American Journal of Sociology*, LVII (1951); Morris Janowitz, *The Community Press in an Urban Setting* (Glencoe, Ill.: The Free Press, 1952); Gregory P. Stone, "City Shoppers and Urban Identification: Observations on the Social Psychology of Urban Life," *American Journal of Sociology*, LX (1954), 36–45; William H. Form, *et al.* "The Compatibility of Alternative Approaches to the Delimitation of Urban Sub-areas," *American Sociological Review*, 19 (1954), 434–440; Joel Smith, William H. Form, and Gregory P. Stone, "Local Intimacy in a Middle-sized City," *American Journal of Sociology*, LX (1954), 276–284; Joel Smith and William H. Form, "Urban Identification and Dis-identification" (unpublished paper, Michigan State University, 1957); and Joel Smith and William H. Form, "Urban Identification: Orientations and Mechanisms" (unpublished paper, Michigan State University, 1957).

[3]Cf. Walter Firey, *Social Aspects to Land Use Planning in the Country-City Fringe: The Cast of Flint, Michigan* (Michigan State College Agr. Exp. Sta. Spec. Bull. 339, East Lansing, 1946); Solon T. Kimball, *The New Social Frontier: The Fringe* (Michigan State College Agr. Exp. Sta. Spec. Bull. 360, East Lansing, 1949); Noel P. Gist, "Ecological Decentralization and Rural–Urban Relationships," *Rural Sociology*, 17 (1952), 328–335; and J. Allan Beegle and Widick Schroeder, *Social Organization in the North Lansing Fringe* (Michigan State University Agr. Exp. Sta. Tech. Bull. 251, East Lansing, 1955).

[4]See Louis Wirth, "Urbanism as a Way of Life," *American Journal of Sociology*, XLIV (1938), 1–24; and Georg Simmel, "The Metropolis and Mental Life," in *The Sociology of Georg Simmel*, trans. and ed. by Kurt H. Wolff (Glencoe, Ill.: The Free Press, 1950), 409–424.

[5]There is, however, a very important difference: according to the urban and rural theorists, the nature of urban social life is of a different *quality* from that of rural life; the fringe investigators, on the other hand, indicate a *lack* of social life. A

the past. Thus an image of rural life exhibiting a high degree of community integration and identification may have tempted acceptance of the implication that these are exclusive qualities of rural communities.

STATEMENT OF THE PROBLEM

In view of these considerations, the social relationships and identifications of fringe area residents deserve re-examination. Accordingly, the study to be reported here was undertaken. It was decided to examine fringe residents' identifications and their behavior patterns or "integration." To the degree that positive identification and integration patterns are present among fringe dwellers, it would be necessary to question the conclusion that fringe area social life lacks cohesive, informally organized patterns of interaction.

The research site chosen for the study was the rural-urban fringe area surrounding Lansing, Michigan. A random sample of residents was drawn from the universe and interviews were conducted with 136 farmers and 121 nonfarmers, in 65 randomly chosen sections of the area. The area as a research universe met all the criteria of a rural-urban fringe: (a) location beyond the boundaries of legal cities, (b) mixed rural and urban land uses, (c) density ratios intermediate between contiguous rural and urban areas, (d) an occupational mixture of farmers, city workers, and part-time farmers, and (e) unincorporated governmental structures with relatively lax zoning regulations.[6]

Methodological and financial considerations necessitated drawing the farmer sample at twice the rate of the nonfarmer sample (sampling rates were 1:2 for farmers and 1:4 for nonfarmers). The sampling rates were made comparable when the data for the total sample were analyzed by reducing the frequencies of farmer responses by one-half.

THE AREA OF STUDY

The rural-urban fringe area surrounding the city of Lansing is economically (and possibly socially) dependent upon the central city. Therefore, many characteristics of the Lansing fringe area may be a function of its location near Lansing. Some information regarding Lansing may clarify this relationship.[7]

Lansing possesses characteristics similar to other medium-sized in-

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notable example of emphasis on difference in quality may be found in Ferdinand Toennies, *Fundamental Concepts of Sociology (Gemeinschaft und Gesellschaft)*, trans. and ed. by Charles P. Loomis (New York: American Book Co., 1940). For emphasis on a lack of social life in the fringe area see Firey, *op. cit.*

[6]This definition is taken from Kurtz and Eicher, *op. cit.*

[7]The description of Lansing has been derived from the following sources: U. S. Bureau of the Census, *U. S. Census of Population, 1950*, Vol. II: *Characteristics of the Population, Part 22, Michigan*, Ch. B, P–B22 (Washington: Government Printing Office, 1952); Beegle and Schroeder, *op. cit.*; and Smith, Form, and Stone, *op. cit.*

dustrial cities in the north central states.[8] In 1950 the population of Lansing was over 90,000 and its urbanized area included more than 40,000 additional people. One-half of this urbanized area population resided in East Lansing. The city is located in south central Michigan, in a standard metropolitan area of more than 170,000 inhabitants.

Of the employed males living in Lansing, 44.2 per cent were working in manufacturing industries in 1950; of these, three-quarters (75.5 per cent) were engaged in the manufacture of motor vehicles and motor vehicle equipment. Of all employed males, over half (53.3 per cent) were classified by the Census Bureau as being foremen or working in skilled, semi-skilled, and unskilled occupations.

J. Allan Beegle and Widick Schroeder, working with a sample of more than 500 Lansing workers, report the median age at slightly more than thirty years. The same sample indicated that 43.5 per cent had obtained a high school diploma. The median education attainment was within the "some high school—did not graduate" category.

Census data indicate that the 1949 median income of Lansing families was $4,097. One out of ten families (10.7 per cent) earned less than $2,000 in that year and approximately the same proportion (12.3 per cent) earned $7,000 or more. The modal family income (24.1 per cent of the total distribution) is in the $3,000–$3,999 category.

In addition to the demographic information provided by Beegle and Schroeder and the Census Bureau, information pertaining to social life in Lansing has been collected by Joel Smith, W. H. Form, and Gregory P. Stone. In the context of the present fringe study, perhaps the most significant finding of these investigators was that intimate social relationships which contribute to social integration "are prevalent in the city and are found both throughout the city and within local areas of residence."[9] Thus the Lansing rural-urban fringe area surrounds an urban center which does not fit the stereotyped picture of a city of anonymous isolates formally integrated on coercive bases.

RESULTS

Characteristics of Lansing fringe residents: Included in the field schedule were questions designed to determine the type of inhabitants in the area, their perceptions of their locale, and their participation patterns. These questions and the results obtained from them may be grouped in five general categories:

1. An examination of the *previous residential experience* of sample

[8]Beegle and Schroeder make the following observation: "With the exception of Michigan State University to the east, Lansing possesses characteristics similar to numerous industrial centers of comparable size in the North Central States" *(op. cit.,* p. 9).

[9]Smith, Form, and Stone, *op. cit.,* p. 283.

members (see Table 1) reveals that the movement to this fringe area is basically a recent and local phenomenon which may be characterized as a centrifugal expansion of Lansing. More than half of the Lansing fringe residents are in-migrants who came to the area during the post-World War II period, most of these having migrated from the central city. The data presented in Table 1 indicate that two-thirds of the respondents were raised within the study counties (the three counties surrounding the one in which Lansing is located) or continguous counties. Of this group, approximately equal numbers were raised in rural and urban areas. Finally, Lansing fringe residents, as a group, have not experienced many changes of residence since 1940, other than the move to the area.

2. *Demographic characteristics* of the sample were examined to determine the composition of the population. (These data are also

Table 1. Selected characteristics of the Lansing rural-urban fringe sample

Characteristic	%
Raised	
In a city	53.7
In Lansing or East Lansing	25.1
In the study area	19.8
In one of the study counties outside the study area (excluding Lansing and East Lansing)	14.5
In a county contiguous to study counties	7.7
Moved*	
From a city	82.2
From Lansing or East Lansing	57.6
To the area after 1945	71.0
Occupation and employment	
Factory worker	36.0
Urban occupation other than factory	24.9
Full-time farmer	23.8
Part-time farmer	12.1
Works in Lansing	62.2
Other characteristics	
Owns home	88.4
Children under 17 years of age at home	61.1
Head of household is under 45 years of age (Median: 44 years)	53.5
Family gross weekly income of $200 or more (Median: $108)	19.8
Occupied fewer than three residences since 1940	51.1

*Respondents who were born in the area are excluded.

presented in Table 1.) Residents exhibit mixed occupational characteristics, with almost one-quarter farming full-time, 12 per cent farming part-time, more than one-third working in factory jobs, and one-quarter employed in a diversity of other urban occupations.[10] Almost two-thirds of the sample members work in Lansing (see Table 1). A large proportion of the fringe area residents are owners of their homes. The age structure of the area suggests that the population is fairly young; more than half of the respondents are under 45 years of age. Moreover, since less than one-quarter of the respondents have more than two children under seventeen and almost 40 per cent have none, they are probably at a very early stage of the family life cycle. The economic status of the group was fairly high, with one out of five families grossing more than $200 a week and a median gross family income of $108.[11]

3. *Perceptions of the area* were consistent to a degree. When sample members were asked why they chose to live in the particular locale, only a few indicated that they had actually chosen the area because of any special attributes it had on which they placed positive valuation (see Table 2). Rather, responses suggesting coercion based on the economic circumstances of the respondent as related to the real estate market of the total metropolitan area were quite prevalent.

The fringe was not perceived as a unique independent type of residence area by the sample members. More than two-thirds of the respondents could not provide a local name for the area and one-third felt that this fringe is only part of a larger area rather than a distinctive locale. Although approximately two-thirds reported that the area is rural in nature, a similar proportion indicated that it is occupied by city people. However, two-thirds of the minority who did not classify the area as rural felt that local inhabitants are rural people. In addition, of those respondents who felt that rural and urban people think differently, three-quarters reported that the local inhabitants think like rural people. Almost two-thirds of the sample members selected neighborhood boundaries that encompassed areas eight miles or less (see Table 2).

4. Data elicited in the interviews about respondents' *evaluations of the Lansing fringe area* are also presented in Table 2. The responses reveal a general positive orientation toward the local area with a simultaneous negative evaluation of the city as a place in which to live. When respondents were asked whether they preferred to remain in the area, over 90 per cent replied in the affirmative. When asked to compare the advantages of fringe residence with city and rural life, the

[10]Part-time farmers were defined operationally as farmer respondents who indicated that they also engage in nonfarm work for income.

[11]Although the pitfalls of combining farmer and nonfarmer incomes are realized, data were not available to adjust income responses for purposes of comparability.

Table 2. Respondents' evaluations of the Lansing rural-urban fringe area

Evaluations	%
Fringe residence compared to other areas	
Fringe advantageous compared to Lansing	96.3
Fringe advantageous compared to rural area*	79.5
Lansing advantageous compared to fringe	30.9
Definition of type of area	
Local residents are no different from city people	66.7
The area is rural in nature	66.1
The local area is part of a larger area	33.3
The area has a local name	29.6
Neighborhood boundaries encompass a total of eight miles or less	65.9
Other evaluations	
Would like to continue living in the area	91.5
Motivation for moving into the area indicates a choice based on positive valuation†	8.2

*Respondents who indicated that the area is rural in nature are excluded.
†Respondents who were born in the area are excluded.

preponderance of positive evaluations of the local area was again revealed. In addition, a majority felt that the area was improving, although one-half still felt that it lacked some facilities.

5. *Social participation* differentials were also measured (see Table 3). Respondents' opinions on how well people in the area know each other were recorded by utilizing a five-item check list ranging from "very well" to "not at all." The extreme categories were selected infrequently, while the middle category ("fairly well") was chosen by half of the sample. In a comparable check list, provided to determine how many local residents respondents know by name, the most frequent choice was "a few."

An examination of family interaction patterns reveals that almost one-third of the sample members rarely come into contact with any families in the area, 40 per cent never visit local families, and two-thirds do not lend to neighbors (see Table 3). The influence of Lansing on friendship patterns is evident. Friends who are visited are more likely to live in the city than in the area, and Lansing was the most frequently mentioned place when respondents were asked for the addresses of their three best friends.

One-half of the sample members reported memberships in formal organizations; the most frequently mentioned meeting places were local

Table 3. Respondents' participation in the Lansing rural-urban fringe area

Participation	%
Residence of three best friends	
All in the local area	18.0
At least one in the local area	47.1
All in Lansing	24.1
At least one in Lansing	56.9
Visiting and family contact	
Visits friends in the local area	50.5
Visits friends in Lansing	58.2
Never comes into contact with area families	29.4
Never visits local families	39.7
Never lends to neighbors	65.1
Organizations and activities	
Does not belong to any formal organizations	50.3
Does not participate in local informal activities	91.0
Other participation	
Knows people in the area "fairly well"	50.5
Knows "a few" by name	41.3
All shopping is done in Lansing	40.2
Does not keep up with local news	24.6

towns. Participation in local informal activities was found to be rare, with over 90 per cent reporting none (see Table 3). Lansing's influence on shopping patterns is also evident: 40 per cent indicated that all their shopping was done in city stores and another 20 per cent reported utilizing Lansing for more than half of their shopping. In listing the sources from which they obtained local and township news, one-quarter of the respondents reported that they simply do not keep up with news of the immediate area (see Table 3). Among those who do keep up with local and township news, friends and neighbors were the most frequently mentioned sources for this information.

Scale construction: A group of questions focused on integration patterns, and another group oriented to modes of identification, were included in the field schedule. Scalogram analysis of responses was attempted in order to derive categories of integration and identification that would also differentiate adjustment types.

In the case of integration, the scalogram procedure yielded five scale types which were deemed adequate for classificatory purposes.[12]

[12]The problems raised by a four-item scale, particularly as regards any conclusion about the unidimensionality of the universe from which the items were selected,

Table 4. Integration scale, indicating observed and chance response pattern frequencies

Pattern of items				Errors	Item nos.*				Probability of types	No. cases expected	No. cases observed	Scale types
					3	5	9	10				
X	X	X	X	0	.29	.43	.59	.67	.0493	12.67	35	V
X	0	X	X	1	.29	.57	.59	.67	.0653	16.78	17	
X	X	0	X	1	.29	.43	.41	.67	.0350	9.00	4	
X	X	X	0	1	.29	.43	.59	.33	.0243	6.25	4	
X	X	0	0	2	.29	.43	.41	.33	.0169	4.34	0	
X	0	X	0	2	.29	.57	.59	.33	.0322	8.28	6	
0	X	X	X	0	.71	.43	.59	.67	.1207	31.02	36	IV
0	X	X	0	1	.71	.43	.59	.33	.0594	15.27	6	
0	X	0	X	1	.71	.43	.41	.67	.0839	21.56	19	
0	0	X	X	0	.71	.57	.59	.67	.1600	41.12	36	III
0	0	0	X	0	.71	.57	.41	.67	.1112	28.58	22	II
X	0	0	X	1	.29	.57	.41	.67	.0454	11.67	2	

0	0	0	0	0	.71	.57	.41	.33	.0548	14.08	45	I
0	0	X	0	1	.71	.57	.59	.33	.0788	20.25	12	
0	X	0	0	1	.71	.43	.41	.33	.0413	10.61	6	
X	0	0	0	1	.29	.57	.41	.33	.0224	5.76	7	
Total									1.0009	257.24	257	

Observed number of errors = 89 — Chance number of errors = 142.39

Observed coefficient of reproducibility = .913 — Chance coefficient of reproducibility = .861

*Item questions and the dichotomization of responses are as follows:

3. About how many [families in this area] do you spend a whole afternoon or evening with every now and then?
   (71%) "O" responses: none, one.
   (29%) "X" responses: two or more.
5. Do you and your husband/wife belong to any groups or organizations? Where does it meet?
   (57%) "O" responses: belongs to none, belongs to no organization which meets in the neighborhood or a local small town.
   (43%) "X" responses: belongs to an organization which meets in the neighborhood or a local small town.
9. How do you keep up with the news of what is happening: right around here? in this township? in this county? in Lansing or East Lansing?
   (41%) "O" responses: does not use local sources, uses one local source.
   (59%) "X" responses: uses two or more local sources.
10. Where do you go to: shop for groceries? buy gasoline? shop for clothing? a drugstore? barbershop or beauty parlor? nightclub or tavern? church?
   (33%) "O" responses: all in Lansing.
   (67%) "X" responses: some or all in the local area.

The derived scale, together with observed and chance response pattern frequencies, is presented in Table 4. The pattern of identification responses, in contrast, did not meet scalogram criteria. As an alternative procedure, identification responses were subjected to analysis by the method of summated ratings, but they failed to meet requirements once again.[13]

Since the two methods suggested that the individual battery items could not be utilized as a group in any relatively simple additive way, the responses to all identification-related questions were examined to determine whether one or more of them seemed to be particularly revealing. This examination indicated that two of the questions had elicited responses which seemed to yield relevant material for the purpose.[14] On the basis of these responses sample members were categorized according to three aspects of their identifications: direction, content, and depth.

1. *Direction.* Respondents were assigned to "positive" and "negative" categories on the basis of their evaluations of the local area.

2. *Content.* Having established assignments based on local evaluations, positive responses were examined to determine sample members' reasons for their position. These were classified as: personal, localistic, ecological, social, and economic.

3. *Depth.* A second classification of positive responses was undertaken to analyze another variable that might influence evaluations of present residence. In this case a dichotomous classification was utilized, reflecting whether sample members moved into the area, thus choosing the Lansing fringe as a place to live, or whether they were raised in the area.

Direction, content, and depth frequencies are presented in Table 5. These three characteristics were found to be too unrelated to combine into complex identification types that would reflect all dimensions simultaneously.

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were disregarded inasmuch as the sole concern in this scaling was the construction of a limited number of empirical types for purposes of classification and analysis.

[13]See Rensis Likert, "A Technique for the Measurement of Attitudes," *Archives of Psychology*, 140 (1932), 5–55.

[14]There are, of course, many problems involved in utilizing this ex post facto technique. However, we decided that item selection based on the reading of a list of unidentified sample responses, though not strictly following rigid hypothesis-collection-test procedure, would allow us to utilize significant data that might otherwise be lost.

The two questions utilized were:

(1) *If you had your choice,* would you continue living around here?

_____Yes. What do you dislike about it?

_____No. What do you dislike about it?

_____Don't know. Do you have any reasons for wanting to stay?

_____Do you have any reasons for wanting to move?

(2) How did you happen to move *around here* rather than some other part of the Lansing area?

Table 5. Frequencies of identification dimensions

Identification dimension	No.	%
Direction		
Positive	173	91.5
Negative	16	8.5
Total	189	100.0
Content		
Personal (good for raising children, freedom, etc.)	66	38.2
Localistic (raised here, all I know, etc.)	19	11.0
Ecological (near work, near facilities, etc.)	16	9.2
Social (friends here, good neighbors, etc.)	11	6.4
Economic (making good living, money tied up here, etc.)	6.5	3.8
Social-ecological	10.5	6.1
Social-personal	8.5	4.9
Social-economic	4	2.3
Ecological-personal	7	4.0
Ecological-economic	6	3.5
Other combinations with ecological or economic	10.5	6.1
All others	8	4.6
Total	173	100.1
Depth		
Born in the area, moved in when a child	37.5	21.7
Moved into the area	135.5	78.3
Total	173	100.0

Extent of fringe area social life: Although we cannot utilize the distribution of respondents among integration types as a measure of the extent of participation in the fringe area, an examination of the scale distribution indicates that many residents visit neighbors, hold membership in local organizations, use local sources for news, and shop locally (see Table 4). This raises doubts about the validity of the conception of the fringe area as an "institutional desert" since it is evident that within-area integration does exist. In addition, an examination of Table 5 reveals that over 90 per cent of the sample members indicated positive identification with the area. Certainly, then, at least minimal emotional bonds do exist in the fringe area.

The presence of integrated and identified residents in the Lansing

fringe calls into question descriptions of fringe area social life presented by other investigators. Perhaps the inconsistency exists because their conclusions are not relevant to rural-urban fringe areas in general. For one thing, others conducted their research in areas which are more clearly suburban than fringe.[15] For another, sociologists working in the areas surrounding central cities have usually concentrated on recent arrivals, while ignoring long-time residents. This second factor has directed the attention of sociologists to the quantities and qualities of urban people who are moving to the area while their next-door neighbors, the farmers, have been largely ignored.

Such biases, if they exist, can easily create a false impression of fringe area social life. While it is true that many of the residents do not participate in the area, the mere presence of nonparticipants does not justify the conclusion that the fringe lacks within-area participation. In addition, the position that residents of the area lack emotional bonds cannot be accepted.

What may account for the different adjustment patterns? Given the degrees of integration and identification found in the Lansing fringe area, the question was raised as to what factors may account for the occurrence of these various modes of adjustment. In an attempt to isolate these factors, four indexes of different aspects of respondent attributes were constructed. They included:

(1) Rural-urban experience. This index was constructed on the basis of: (a) whether respondents moved to the Lansing fringe from a rural or an urban area and (b) whether respondents were raised in a rural or an urban area.

(2) Lansing–non-Lansing experience. The factors taken into account were assigned weights on the basis of: (a) whether respondents moved to the fringe area from Lansing and (b) whether respondents were raised in this central city.

(3) Stability-mobility. Weights were assigned on the basis of: (a) lifetime and non-lifetime residence in the Lansing fringe and (b) the number of residences occupied since 1940.

(4) Commitment to the area. Respondents were assigned commitment weights if they: (a) were in an occupation which would "root" them to the area (full-time farming and "own business" were considered as such), (b) owned their homes, (c) were in the older age groups, and (d) had school-age children living at home.

Examination of the association of these four indexes with the

[15]Reference here is primarily to Firey, *op. cit.*; Kimball, *op. cit.*; and Beegle and Schroeder, *op. cit.* These investigators designate their research areas as "fringe" although each area more clearly meets suburban criteria.

Interestingly, if we accept these three publications as studies of the suburb, rather than the fringe, the inconsistency still exists but shifts from a fringe to a suburb inconsistency. For recent research dealing with suburban social life see William Dobriner, ed., *The Suburban Community* (New York: Putnam, 1958).

various aspects of identification and integration indicated that long-time, relatively stable respondents who have rural, non-Lansing backgrounds and who are committed to the area tend to participate in the Lansing fringe more frequently than sample members who exhibit converse characteristics (see Table 6). Attempts to account for the three aspects of subjective identification in these terms met with

Table 6. Associations between the integration and identification dimensions and four indexes*

	Objective integration			Subjective identification						
					Content			Depth		
Index	P†	$\bar{C}$‡	λ_b§	Direction P	P	$\bar{C}$	λ_b	P	$\bar{C}$	λ_b
Rural–urban experience	.001	.451	.121	.25	.001	.587	.061	.001	.682	.214
Lansing–non-Lansing experience	.001	.453	.036	.48	.025	.373	.00	.001	.481	.00
Stability–mobility	.001	.531	.115	.45	.001	.644	.077	.001	.798	.283
Commitment to the area	.005	.415	.096	.10	.001	.493	.061	.001	.457	.071

*Direction of the significant associations:

1. Rural-urban experience. Residents of rural background exhibit: high integration; social, economic, and localistic content; and prior preference for the area.

2. Lansing–non-Lansing experience. Residents with Lansing background exhibit: low integration, ecological and personal content, and prior preference for the area.

3. Stability–mobility. Stability is associated with: high integration, economic and localistic content, and prior preference for the area.

4. Commitment to the area. High commitment is associated with: high integration, social and economic content, and no prior preference for area residence.

†Probability of chi-square.

‡C is the contingency coefficient and is defined as follows:

$$\bar{C} = \sqrt{\frac{\text{chi-square}}{\text{chi-square} + N}}$$

However, C understates the degree of association present, since the upper limit, which is a function of the number of rows and columns, approaches, but does not reach, the value of 1.0. To obviate this limiting factor to some degree, Peters and Van Voorhis suggest a correction factor which is based on row and column values; by utilizing the correction factor $\bar{C}$ is derived. See Charles C. Peters and Walter R. Van Voorhis, *Statistical Procedures and their Mathematical Bases* (New York: McGraw-Hill, 1940), p. 398.

§Lambda (λ) is one of several degree-of-association measures discussed by Leo A. Goodman and William H. Kruskal in "Measures of Association for Cross Classifications," *Journal of the American Statistical Association*, 49 (1954), 732–764. Referred to as a "prediction improvement measure," lambda indicates the increase in efficiency of prediction provided by the introduction of a cross-classified attribute.

failure in the case of direction and success for both content and depth. These latter are significantly associated with all four attributes of the respondents in varied ways (see notes to Table 6).

GENERALIZATIONS

In terms of the objectives of this study, the most important finding is that social life in the Lansing fringe area does not fit the stereotyped pattern described by previous investigators. It is suggested that the discrepancy may be due to a conceptual confusion among sociologists since most "fringe" studies have been conducted in a variety of areas that have lacked some or all of the characteristics of rural-urban fringes. While most previous studies have been carried out in suburbs, subdivisions, or other such types of residential areas, the language used generally designates that the study site was a rural-urban fringe area.[16] In addition, when a mixed rural-urban area has been investigated, sociologists have usually concentrated on the newcomers, that is on the nonfarmer in-migrants.

Toennies and Durkheim have pointed out that urban social formations necessitate a different order of interaction than their rural counterparts. Coexistence of these divergent life styles is a unique characteristic of the fringe area. In such a situation of residential contact, what pattern of life emerges? Is there a tendency toward side-by-side existence or is there a fusion of rural and urban ways of life?

The findings reported in this paper suggest that the former pattern has developed. The data indicate, for instance, that it is the lifetime-resident farmers who participate in the area. Then where do the urban workers who have recently moved to the area participate? The data suggest that these residents participate in their former areas of residence. These, then, are the residents who are *in*, but not *of*, the area.

In conclusion, the findings of the present study have implications for our understanding of the social life of cities. The analysis has indicated that migrants from the central city tend to return to their areas of previous residence for relatively intimate social intercourse. This implies that part of the fringe area may be viewed as an extension of the social city, as opposed to the legal city. Therefore, sociologists working on the nature of urban social life are being misled if they are confining their sample to residents of the city proper. Finally, we have added just one additional set of data to the rising accumulation that contradicts the traditional description of the city as contractual, anonymous, and isolated.[17] The city does seem to be an area of intimate social interaction, at least for some persons who live outside of its legal boundaries.

[16]For a discussion of these studies see Kurtz and Eicher, *op. cit.*

[17]Cf. Wirth, *op. cit.*, and Simmel, *op. cit.*

GLENN V. FUGUITT

A Typology of the Part-Time Farmer*

A typology of the part-time farmer is presented, based upon past, present, and future commitment to farm and nonfarm occupations. This career typology is applied to data for 153 part-time farmers from a Wisconsin study, resulting in a reduction from 90 to 24 types. A necessary condition for the usefulness of part of the typology is demonstrated with the Wisconsin data by showing types to be different on the basis of related occupational variables.

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MULTIPLE jobholding, the situation where one person holds more than one job, is on the increase in the United States. The implications of this practice have barely been explored except in one special circumstance—that in which farming and some other occupation are jointly pursued by the individual. Since at least 1930, students of rural life have been concerned with the so-called part-time farmer. Yet most of this work has left a great deal to be desired. Leonard S. Salter and L. F. Dehl, in a survey article written in 1940, characterized part-time farming research as being "static and descriptive" and stressed the problems arising from lack of comparable definitions of the part-time farmer.[1]

Typically, in this earlier research, only those persons were interviewed who fell under the particular definition of a part-time farmer which was used, and their characteristics were analyzed as if they were a homogeneous group. In recent years, however, workers have begun to move away from this broad descriptive approach. George A. Donahue and Robert E. Galloway, for example, interviewed full-time as well as part-time farmers in their studies in Minnesota and Kentucky, and

*This research was supported in part by the National Extension Center for Advanced Study. The Numerical Analysis Laboratory provided assistance in computations for the study.

[1]"Part-time Farming Research," *Journal of Farm Economics*, XXII (1940), 584.

divided the part-time group into subgroups for comparison.[2] Recent research by H. R. Moore and W. A. Wayt has dealt with one type of part-time farmer, being limited to those who are working toward becoming full-time farmers.[3] Kerlin M. Seitz, in a recent article, has classified part-time farmers in northern Wisconsin according to the nature of their off-farm occupations.[4] Furthermore, a number of participants in the research clinic on part-time farming at the 1958 Rural Sociological Society meetings expressed the conviction that the practice of part-time farming could best be considered in terms of a variable or set of groups rather than a single category.[5]

The present paper is an extension of this approach. The objective is to present a typology of the part-time farmer oriented about his career, to apply this typology to a sample of Wisconsin farm operators, and, using the Wisconsin data, to determine whether or not types in the system are different in terms of selected occupational characteristics.

A PROPOSED TYPOLOGY

The career of the part-time farmer may be viewed in terms of two major axes: time and occupational commitment. The time axis, from beginning of work until death or retirement, has the present as the major reference point, at which time all persons included are engaged in both farm and nonfarm work. At given points in the past or future, however, each individual involved could be in both farm and nonfarm work, or exclusively a farmer or a nonfarm worker.[6]

Only one of many aspects of past occupational commitment will be considered. This is the situation of the operator immediately prior to last becoming a combination farmer and nonfarm worker. There are

[2]Donahue, "Socio-Economic Characteristics of Part-time and Full-time Farmers in the Twin-Cities Area," *Journal of Farm Economics*, XXXIX (1957), 984–992; "Full-time and Part-time Farmers Value Orientations Toward Social Institutions," *Rural Sociology*, 22 (1957), 221–227; Galloway, *Part-time Farming in Eastern Kentucky* (University of Kentucky Agr. Exp. Sta. Bull. 646, Lexington, 1956).

[3]*The Part-time Route to Full-time Farming* (Ohio State University Agr. Exp. Sta. Res. Bull. 793, Wooster, 1957).

[4]"Types of Part-time Farming in Northern Wisconsin," *Transactions of the Wisconsin Academy of Sciences, Arts, and Letters*, XLVII (1958), 161–171.

[5]Predipto Roy and Walter L. Slocum, "Demographic Factors and Definition of Part-time Farming," p. 6; Frederick C. Fliegel, "The Impact of Part-time Farming on the Family," p. 10; Everett M. Rogers, "Communication Behavior of Part-time Farmers," p. 5; all in *The Research Clinic on Part-time Farming* (Pullman: Dept. of Rural Sociology, State College of Washington, 1958).

[6]Although often used interchangeably, the terms nonfarm work and off-farm work must be distinguished. Farmers who do custom field work or who are hired laborers on other farms are arbitrarily excluded from this typology unless they also have nonfarm jobs. Here a nonfarm job is considered one not ordinarily done by a farmer in carrying on the farm enterprise. Such work may or may not be done off the farm.

two general possibilities, that of being a farmer exclusively or a nonfarm worker exclusively, with a residual category for those who have been combination farmers and nonfarm workers throughout their careers.

This background classification should be important. Farmers who take nonfarm jobs may be expected to be quite different in many ways from nonfarm workers who go into agriculture while retaining a nonfarm job. Most of the latter group would likely have moved from a city to a farm in the fringe, keeping their city job.

The problem of developing subtypes according to degree of present commitment is essentially an extension of the problem of defining a part-time farmer. Most such definitions are not as complete as may be desired. Usually, off-farm or nonfarm occupational commitment is what is measured, with the implicit assumption that farm commitment is the complement of this. Very often also, this off-farm or nonfarm involvement is measured in terms of number of days or weeks worked in a year without regard for the number of hours worked during these days. There is certainly no reason to believe that a person working during a day in a nonfarm job has necessarily put in a full eight hours.[7] Finally, any allowance for the possibility of holding more than one nonfarm or off-farm job is usually lacking. In an analysis where the number of occupations must correspond to the number of respondents, information must be limited to the principal occupation. Yet degree of commitment to the principal nonfarm job and to all nonfarm jobs together (or to each job separately) may be quite different.

Thus, in measuring degree of commitment to farm and nonfarm occupations, it is desirable to take into consideration: (a) both the farm and nonfarm commitment, (b) number of hours worked when working as well as period of time worked, and (c) most important nonfarm occupation as well as all nonfarm occupations together.

Considering first nonfarm occupational commitment, the average number of hours worked per week when working in all nonfarm jobs may be tabulated against the number of weeks worked during the year. These two dimensions may then be collapsed by computing one of two equivalent average values for each respondent—either the number of hours worked per week per year or the number of full-time

[7]See discussion on this point by Edward Gross in "The Occupational Variable as a Research Category," *American Sociological Review*, XXIV (1959), 640–649. In measuring degree of commitment to occupations some variable other than amount of time worked, such as net income, might be used. For most sociological research, however, time would appear to be a more significant variable. Thus, in considering the implications of part-time farming for the family and communication behavior, Fliegel and Rogers, respectively, presented a number of hypotheses based on the time use of the part-time farmer. See their papers in *The Research Clinic on Part-time Farming* (see n. 5).

day equivalents. In the present scheme, the average number of hours worked per week for the year is used, and farmers having nonfarm occupations during the year are divided into two groups on the basis of this measure.

With similar data for the principal occupation it is possible to compute another average, so that farmers can again be divided into two groups according to commitment to principal nonfarm occupation. Also, respondents may be grouped by hours worked during the portion of the year they worked in their principal nonfarm occupation. With this information it is possible to differentiate, among workers with a low average number of hours worked for the year in a principal occupation, between those with full-time and those with part-time jobs during the period worked. For convenience, the former will be referred to here as "seasonal full-time workers", or simply "seasonal workers," and the latter as "part-time workers."

These three dichotomized variables—average hours worked per year in all occupations, average hours worked per year in principal occupation, and hours worked during part of year worked in principal occupation—may be combined to produce different combinations of commitment to nonfarm occupations. Such a combination would ordinarily lead to $2^3=8$ categories. If the break between each of these dichotomies is made at the same number of hours, however, only five possible categories result. There are two reasons for this. First, a farmer cannot average more hours during the year in his principal occupation than in all his nonfarm occupations together. Second, all farmers averaging more than a specified number of hours in their principal occupation during the year cannot average less than this in their principal occupation during the portion of the year worked. A farmer working more than 30 hours per week per year could not work less than 30 hours per week during the portion of the year worked, since this must be equal to or less than a year.

The five categories of involvement in nonfarm occupations are indicated in Table 1. Here *M* stands for more than and *L* stands for less than a specified number of hours a week. The seasonal *A* and part-time *A* categories are for those whose principal nonfarm job is seasonal or part-time, but who have one or more other nonfarm jobs which pull the over-all average number of hours worked per year above the cutting point.

While the same detail could go into the measurement of farm commitment, only two categories are distinguished. These are termed full-time and part-time farm workers, on the basis of a dichotomy of the average number of hours worked per week in farm work during the year. Combining these farm and nonfarm categories results in $5 \times 2 = 10$ possible subtypes of present occupational commitment.

Table 1. Categories of present commitment to nonfarm occupations based on hours worked per week

	All nonfarm jobs	Principal nonfarm job	
	Average for year	Average for year	Average for part of year worked
1. Full-time	*M*	*M*	*M*
2. Seasonal *A*	*M*	*L*	*M*
3. Part-time *A*	*M*	*L*	*L*
4. Seasonal *B*	*L*	*L*	*M*
5. Part-time *B*	*L*	*L*	*L*

The future portion of the time axis can of course be considered only in terms of the stated desires of the respondents. Here again the alternatives may be to do either farm work exclusively, a combination of farm and nonfarm work, or nonfarm work exclusively, prior to retirement.

The complete career typology is presented schematically in Table 2. Three past subtypes may be combined with any of the ten present subtypes along with any of the three future subtypes, so there are

Table 2. A typology of the part-time farmer: the career

Occupational commitment	Past (3 subtypes)	Present (10 subtypes)		Future (3 subtypes)
Farm Exclusively	In farm work exclusively just before change to present status			Would like to become farmer exclusively
		In both farm and nonfarm work—2 farm combined with 5 nonfarm categories		
		Farm	Nonfarm	
Farm and Nonfarm Work Together	In farm and nonfarm work during entire career to present	1. Full-time 2. Part-time	1. Full-time 2. Seasonal *A* 3. Part-time *A* 4. Seasonal *B* 5. Part-time *B*	Would like to continue both farm and nonfarm work
Nonfarm Work Exclusively	In nonfarm work just before change to present status			Would like to become a nonfarm worker exclusively

$3 \times 10 \times 3 = 90$ possible types in all. The system can certainly be criticized as being overelaborate, yet it has been developed with the need for logical completeness uppermost in mind. In any practical application, of course, only parts of such a typology need be considered, or a number of types could be combined. Moreover, it can be expected that the complete typology would be empirically reduced when fitted to a set of data, with no cases found to correspond to many of the types.

THE TYPOLOGY APPLIED TO WISCONSIN DATA

This typology has been applied to the results of a part-time farming study carried out in Wisconsin in the spring of 1958. The sample area of this study consists of eleven townships extending from Madison to Milwaukee. Thus, none of the area is very remote from urban centers and much would be classified as urban fringe. A random sample of farm operators whether or not engaged in nonfarm work, and stratified by townships, was selected. (Sample lists based on the rolls of county agricultural stabilization and conservation committees were used.) A total of 399 schedules were obtained from operators who had lived on the place at which they were interviewed during the preceding crop year.

Table 3. Wisconsin farm operators classified according to a typology of part-time farmers

Present commitment	Former farmers' future plans					Former nonfarm workers' future plans				
	Total	*A**	*B*†	*C*‡	*NA*§	Total	*A**	*B*†	*C*‡	*NA*§
A. Farm work, part-time, with principal nonfarm occupation:										
1. Part-time	3	1	2	0	0	0	–	–	–	–
2. Seasonal	2	1	1	0	0	1	–	1	–	–
3. Full-time	18	6	10	1	1	30	9	18	3	–
B. Farm work, full-time, with principal nonfarm occupation:										
1. Part-time	40	14	21	2	3	1	–	–	1	–
2. Seasonal	19	10	7	1	1	8	3	4	–	1
3. Full-time	17	10	7	–	–	14	10	4	–	–
Total	99	42	48	4	5	54	22	27	4	1

*Stop nonfarm work, continue farming.
†Continue farm and nonfarm work.
‡Stop farm work, continue nonfarm work.
§Not obtained.

Present nonfarm occupational commitment was measured in terms of work experiences during 1957. Of the respondents, 153 did nonfarm work in that year. The dividing point for all four present commitment variables was uniformly set at 30 hours. Principal occupation was defined as the one with the highest average number of hours worked per week during the year.

The multiple classification of the study respondents according to this typology is presented in Table 3. It is seen that an empirical reduction of the number of types has been effected which is of considerable magnitude, with only 24 of the 90 possible types having any cases. In classifying the operators according to past occupational commitment, it was found that no operator had been a combination farm and nonfarm worker throughout his entire career. This eliminated 30 possible types. In present occupational commitment, seasonal *A* and part-time *A* categories dropped out, since no operators averaged more than 30 hours per week per year in all their nonfarm occupations and less than 30 in their principal nonfarm occupation. This reduced the number of subtypes for present commitment from ten to six and made for a further reduction of 24 types in the overall typology. The other 36 possible types appear as cells in Table 3, and of these there are twelve with no cases.

None of the 24 types remaining are seen to have very many cases. In fact, one-fourth of them have only one case each, and only three have more than ten cases, the largest of these having 21.

The fact that the number of types was reduced by two-thirds shows that the system is not as cumbersome as might first appear. Yet the small number of cases for the types obtained from a sample of 399 farm operators indicates that for most applications only a part of the typology could be used, or types within the system would have to be combined, so as to result in a smaller total number.

THE RELATION OF THE TYPES TO MEASURES OF THE NATURE OF FARM AND NONFARM OCCUPATIONS

Ultimately, the utility of a typology such as this one depends upon the fruitfulness of the research in which it is employed. One necessary, though not sufficient, condition for this usefulness is, however, amenable to empirical examination. This is the degree to which a typology differentiates a population being examined in terms of pertinent related variables. Just as the utility of a socioeconomic scale would be vitiated if the population studied did not differ on this scale, so would the usefulness of a typology be limited if the types were not different in terms of pertinent related variables. If they were not different in this way, the contention that the total group is too heterogeneous to study together would be called into question.

Using the Wisconsin data, certain variables pertaining to the nature of the farm and the principal nonfarm occupation have been related to a part of the typology advanced. As indicated in the last section, the numbers of cases in the cells of the complete system are small —too small to be easily amenable to statistical analysis. Consequently only the first two sections—background before present status and present occupational commitment—are considered together here, with the twelve possible types making up the two total columns of Table 3. It will be noted that only seven of these have as many as eight cases. The null hypothesis that these seven types are homogeneous with regard to selected dichotomized variables has been tested by chi-square.[8] The results, in the first column of Table 4, show the null hypothesis to be rejected for four out of five of the characteristics of the principal nonfarm occupation, and four out of eight characteristics of the farm occupation. These variables, which include type and location of the nonfarm occupations, farm income, and type of farming, reflect basic occupational differences.

Some knowledge of the nature of these differences between the seven types may be obtained by making selected comparisons. Thus the question of whether both present and past commitment differences are related to the occupational variables is examined here by considering six of the seven types. These six may be thought of as three pairs of types with each pair on line *A* 3, *B* 2, and *B* 3, respectively, of the two total columns of Table 3. The two types in each pair, then, are alike in present commitment but different in terms of the two past commitment categories.

By combining each of the pairs, three groups different in present commitment are formed, and the relationship of these groups to the dichotomized occupational variables may be examined in 3×2 tables. Chi-squares for these tables, seen in the second column of Table 4, show that, without regard for past commitment, present commitment differences are significantly related to two out of five nonfarm occupational variables and four out of eight farm variables.

By combining the three types of the six in each total column of Table 3, two groups may be formed, each of which includes all three present commitment categories but is different in terms of past commitment. The 2×2 tables made by tabulating the dichotomized occupational variables for these two groups are the basis of the chi-

[8]All chi-square values given in Table 3 are for cross-classifications which meet the criteria of minimum expected frequencies, with the exception of two, given by W. G. Cochran, "The Chi Square Test of Goodness of Fit," *Annals of Mathematical Statistics*, XXIII (1952), 315–345. These two, found in the last column, are for variables 3B and 3C of the nonfarm occupation. Fisher's exact tests computed for the same cross-classifications, however, also were not significant. All chi-squares with one degree of freedom appearing in the table were corrected for continuity.

Table 4. Chi-square values of the relation of types to farm and nonfarm occupational variables

Occupational variables	7 types compared (6 d.f.)	Combinations of 6 Types Comparing differences in: Present commitment (2 d.f.)	Past commitment (1 d.f.)	Part-time and seasonal (1 d.f.)
Principal Nonfarm Occupation:				
1. Per cent in farm-related occupation	36.8*	17.8*	13.1*	7.5*
2. Edwards scale (per cent white collar)	19.7*	8.7†	10.3*	5.9†
3. Place of occupation				
a. Per cent with occupation in specific place away from home	44.8*	5.7	5.8†	4.3†
b. Per cent of 3a working in town with more than 10,000 population	18.1*	2.6	8.4*	—‡
c. Per cent of 3a traveling 10 or more miles to work	1.3	—	—	—
Farm Occupation:				
1. Type of farming (per cent dairy)	61.5*	24.1*	14.8*	2.1
2. Tenure (per cent full owners)	12.7†	3.3	6.4†	—
3. Cropland (per cent less than 80 acres)	11.3	6.8†	1.3	—
4. Gross farm income 1957 (per cent more than $2500)	34.0*	13.3*	10.3*	—
5. Other labor				
a. Per cent with another household member working full-time on farm	35.6*	10.4*	3.9†	4.9†
b. Per cent reporting some hired labor during year	4.1	2.5	—	—
6. Future farm plans				
a. Per cent wanting to continue both farm and nonfarm work	4.9	3.0	—	—
b. Per cent who have considered enlarging farm operation	4.5	4.3	—	—

*Chi-square value significant at the 0.01 level.
†Chi-square value significant at the 0.05 level.
‡Indicates chi-square value less than one.

squares in column 3 of Table 4. They show that when the effect of present commitment is not considered, the background differences are significantly related to four out of five nonfarm and four out of eight farm occupational variables.

The result of this analysis using the six types points to the need for taking both past and present commitment into account in a career typology when occupational differences similar to these are important.

The seventh type having enough cases for consideration is composed

of those forty former full-time farmers who are now both full-time farm workers and part-time nonfarm workers. An evaluation of the desirability of making the distinction between part-time and seasonal full-time nonfarm work may be made by comparing this type with the other type most like it, composed of former full-time farmers who are now both full-time farm workers and seasonal full-time nonfarm workers. The last column of Table 4 indicates that this distinction does have value for revealing some differences in the nature of the nonfarm occupation and, hence, should be considered in any analysis where this needs to be taken into account. Thus, the two types are significantly different for three of the five nonfarm variables. On the other hand, only one of the farm variables is significantly related, and none of the other chi-square values even approached significance.

CONCLUSION

A typology of the part-time farmer has been presented, and applied to a sample of farm operators. Its usefulness in present or modified form depends upon the degree to which it may or may not facilitate the testing of precise, theoretically relevant hypotheses concerning this segment of our working population. Whether or not the particular typology here advanced proves fruitful, its application to the data from a Wisconsin area leads to the basic conclusion that the part-time farmer category is likely to be a very heterogeneous group, with varying backgrounds, goals, and types of occupational commitments. Thus it appears that real progress can be made in understanding the role of the part-time farmer and the implications of part-time farming upon the incumbent's career, his family, rural institutions, and action agencies only by dealing with more homogeneous categories than any general definition of this practice is likely to produce.

THOMAS O. WILKINSON

Agricultural Activities in the City of Tokyo*

Japan's largest city, Tokyo, contains a significant land area under cultivation. The population of Tokyo who are engaged in agriculture are demographically rural, although administratively they are classified as urban. Not only is agriculture present in Tokyo, but the Japanese urban population as a whole reveals significant agrarian employment. The historical development of Japanese urban industrialism is explored for factors underlying the tenacity of employment and social organization elements which are still agrarian in character.

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THE capital city of Japan, Tokyo, is one of the world's largest urban concentrations. The national census of Japan for 1955 reports the population of the Tokyo metropolitan district as 8.9 million and that of the city proper as 7.0 million.[1] This urban population, located in the only nation in the Far East to have made the demographic transition successfully, provides a unique opportunity to add a valuable cross-cultural dimension to the analysis of rural-urban relationships. With the purpose of highlighting alternatives to Western patterns of urban growth and structure, this paper examines the agricultural activities of Tokyo's population as revealed in recent census data.

*The materials upon which this paper is based were collected while the author was a research sociologist with International Urban Research, University of California, Berkeley, during 1957–1958.

[1]The larger population includes the 23 wards *(ku)* of Tokyo city, eight smaller cities *(shi)*, three rural "counties" *(gun)*, and three offshore islands *(shima)* which constitute the metropolitan prefecture of Tokyo-*to*. The smaller figure refers to that population residing within the ward area of Tokyo City proper. *(Showa sanjunen kokuseichosa, zenkoku to-do-fu-ken-gun-shi-ku-machi-mura betsu shotai oyobia jinko gaisu, [National Census of 1955: Preliminary Reports of Households and Population by Administrative Area]* [Tokyo: Office of the Prime Minister, Bureau of Statistics, 1955], p. 25.)

THE PATTERN OF AGRARIAN ACTIVITIES IN TOKYO

The first striking fact to emerge is that in 1954, 32.8 per cent of the total area within the boundaries of the city proper was devoted to agriculture. This percentage represents some 22.3 thousand acres of the Tokyo city total of 92.1 thousand acres (Table 1). Of the total

Table 1. Land use in the city of Tokyo, 1953*

Land use	Acres	Percentage of total area
Buildings	32,528.65	62.0
Wet fields	12,047.60	13.1
Dry fields	18,101.30	19.7
Forests	2,129.05	2.3
Roadways	712.46	0.8
Ponds, marshes	578.45	0.6
Misc.	1,452.61	1.5
Total	92,050.18	100.0

*Source: *Tokyo Statistical Yearbook, 1953,* (Tokyo: Tokyo Metropolitan General Affairs Office, 1954), Table 2, pp. 2–3.

agricultural area, 12,048 acres were in paddy or wet fields, and 18,101 acres devoted to dry-field cultivation. Figure 1 shows the pattern of agricultural land usage in the city. The areas where agrarian pursuits are high form a rough arc about an urban core of the eleven central wards.

Adachi and Nerima wards, with 68.7 per cent and 65.1 per cent, respectively, of their total areas under cultivation, accounted for 46.9 per cent of the total agricultural acreage in Tokyo and served as the centers of agricultural concentration within the city boundaries. Percentages of land devoted to agriculture decreased from these centers to Koto ward which had 1.4 per cent of its area under cultivation. No individual agricultural holding within these twelve wards exceeded 7.4 acres; the average holding was 1.5 acres. An increasing average size of agricultural holding was associated with increasing concentration of agricultural land usage. Column 2 of Table 2 shows Adachi and Nerima wards with average holdings of 2.0 acres in contrast to 0.4 acres for Koto ward. Increasing concentration of agricultural land usage was also related to an increase in proportion of households dependent exclusively upon agriculture (column 3, Table 2).

The total populations of the twelve "agricultural" areas contained

Figure 1. Tokyo: percentage of total ward area in agriculture, 1953*

*Source: *Tokyo Statistical Yearbook, 1953,* Table 46, pp. 46–47.

all of Tokyo's agriculturally dependent population[2] and 58.0 per cent of the total city population. It is the agriculturally dependent popula-

[2]Data for the agriculturally dependent population of Tokyo was reported in 1954 for only those wards which had more than twenty acres under cultivation; the

Table 2. Demographic characteristics of the agricultural population of the city of Tokyo, 1950–1955*

Area Tokyo agr. wards	1 % of total area in agriculture 1954	2 Average size agr. holding in acres 1954	3 Households 1954 Agr. only	 Mixed agr.	4 % of total Tokyo pop. 1954–1955 Agr. pop.	 Mixed pop.	5 Sex ratio 1954–1955 Agr. pop.	 Total pop.	6 Persons per household 1954–1955 Agr. pop.	 Total pop.	7 Sex ratio employed pop. 14 yrs. and over 1950 Agr.	 All other
Adachi	68.7	2.0	64.0	36.0	19.9	4.8	94.6	104.1	6.9	4.7	103.9	273.3
Nerima	65.1	2.0	66.1	33.9	15.8	2.7	98.8	105.8	6.6	4.5	132.9	225.1
Edogama	58.5	1.2	43.9	56.1	19.7	3.7	99.1	103.3	6.5	4.6	119.0	272.7
Katsushka	53.7	1.6	55.7	44.3	9.7	4.2	96.6	103.3	7.0	4.6	110.7	270.6
Itabashi	44.5	1.5	28.2	71.8	8.5	4.5	98.6	104.7	6.8	4.4	130.9	304.7
Setagaya	40.8	1.2	57.6	42.4	13.0	7.5	99.4	102.9	6.7	4.2	198.2	303.4
Suginami	35.3	1.1	63.9	36.1	6.1	5.8	99.8	103.2	6.7	4.1	231.6	299.3
Nakano	15.9	1.0	47.3	52.7	1.5	4.1	97.1	105.4	6.0	4.0	215.8	290.9
Meguro	8.6	0.6	57.7	42.3	1.2	3.6	95.0	104.1	6.3	4.2	357.1	300.7
Ota	8.1	0.5	57.3	42.7	3.6	8.1	100.8	105.7	6.2	4.3	230.0	334.0
Kita	6.9	1.4	46.6	53.4	0.7	5.0	104.6	103.0	6.1	4.3	175.4	292.1
Koto	1.4	0.4	38.9	61.1	0.3	4.0	93.6	115.4	5.6	4.7	273.9	365.6
Total Tokyo City	32.8	1.5	54.8	45.2	100.0	58.0	98.0	105.4	6.7	4.4	146.7	276.1

*Sources: Population Census of 1950 (Tokyo: Prime Minister's Office, Bureau of Statistics, 1951) vol. VII, pt. 13 (in Japanese). *Tokyo Statistical Yearbook, 1953* (Tokyo: Tokyo Metropolitan General Affairs Office, 1954) (in Japanese). *Statistical Materials Relating to the Population of the Metropolitan Area of Tokyo* (Tokyo: Bureau of Statistics, Prime Minister's Office, 1955).

tion that is of specific interest here, for questions arise as to the nature of this urban population segment. One of the more important of these questions relates to whether or not this group of persons, by census definition urban, displays demographic traits justifying this characterization.

DEMOGRAPHIC CHARACTERISTICS OF TOKYO'S AGRICULTURALISTS

The 98,128 persons who were agriculturally dependent in 1954 made up 1.5 per cent of Tokyo's total population and 0.9 per cent of all households. The importance of these people rests not with their numerical size, which is small as is to be expected, but with the distinctive demographic characteristics which set them apart from the remainder of Tokyo's population. They are by census definition urban, but they display demographic traits which do not functionally warrant such classification.

First, the sex ratios (males per 100 females) in the agriculturally dependent ward populations show them to be heavily feminine in contrast to the masculinity of the total city. The Tokyo population as a whole had a sex ratio of 105.4 in 1955, as against 98.0 for the agricultural population. Column 5 of Table 2 shows that this contrast holds for eleven of the twelve agricultural wards. The exception, Kita Ward, contained but 0.7 per cent of the agriculturally dependent population, with only 6.9 per cent of its total area devoted to cultivation.

A higher urban sex ratio, in contrast to that of the rural population, is characteristic of the total Japanese population: in 1955, the total *shi* or urban sex ratio was 97.1, while the *gun* or rural was 95.9. The lag of 7.4 males per 100 females of Tokyo's agriculturally dependent population behind the city's total population highlights one aspect of the demographic rurality of the agricultural segment.

Comparative age structures reveal further evidence of this rurality. Figure 2 shows the relatively greater contributions of the very young and the very old to total population, which is typical of Japanese rural populations, to be characteristic also of Tokyo's agriculturally dependent population. The population under 14 years of age in the agricultural population is 2.9 per cent greater than that of the total urban population; at the other extreme of the age span, 60 years of age and over, the agriculturalists are 94.4 per cent greater than the total urban group. The agriculturally dependent population is most deficient in that segment of the age structure which provides the

actual total of agriculturally dependent population was probably slightly larger than the total cited here. (*Tokyo-to tokei nenkan, Showa nijubachinen,* [*Tokyo Statistical Yearbook, 1953*] [Tokyo: Tokyo Metropolitan General Affairs office, 1954] Table 25, pp. 40–43.)

greatest adult labor force potential, those in ages 25 through 39 years of age.

The larger family unit found in the agriculturally dominated rural areas of Japan is also evident in Tokyo's agriculturally dependent population. While the city as a whole had an average of 4.4 persons per household, the agricultural population had an average of 6.7. Column 6 of Table 2 indicates a rough positive correlation between persons per household and concentration of agricultural activity. This relationship is shown by the fact that the seven wards containing one thousand or more acres under cultivation had an average of 6.8 persons per household in their agriculturally dependent populations; the remaining five agricultural wards, each with less than two hundred acres under cultivation, had an average of 6.0 persons per household in the agriculturally dependent population.

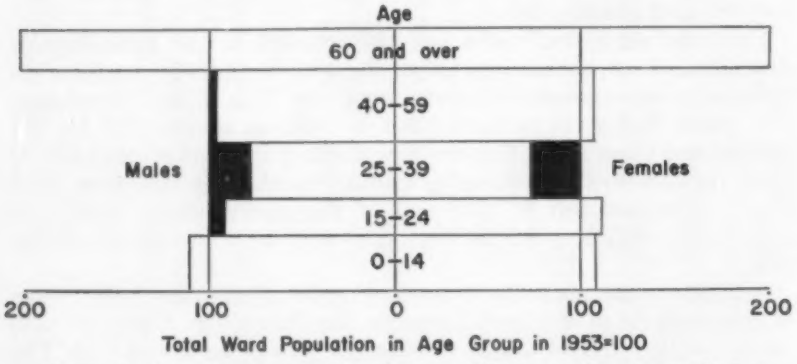

Figure 2. Age structure of agriculturally dependent population as ratio of total population, Tokyo, 1953*

*Source: *Tokyo Statistical Yearbook, 1953*, Table 24, pp. 36–37.

One further dimension of Tokyo's agriculturally dependent population is revealed in patterns of employment. A comparison of the sex ratios of the employed population 14 years of age and over for agriculturalists and nonagriculturalists (column 7 of Table 2) shows a heavy dependence upon females in agricultural activities. Tokyo's employed population in 1950 had a sex ratio of 276.1 as against a sex ratio for agricultural employment of 146.7. This sex ratio differential is evident for each of the agricultural wards. Again, a positive correlation between the concentration of agricultural activities and female employment is indicated. The heavier the agricultural usage, the lower the sex ratio. Adachi Ward with over two-thirds of its area under cultivation shows an agricultural employment sex ratio of 103.9. At the other extreme

of areal concentration in agriculture (for example, Meguro, Ota, Kita, and Koto wards) the average sex ratio for agricultural employment was 259.1.

DISCUSSION AND CONCLUSIONS

Demographic indexes of age and sex structure, family size, and employment patterns have shown that within the administrative boundaries of one of the world's largest cities there exists a small but essentially rural population. Attempts to account for the existence of such a population segment can be theoretically useful to the urban analyst in several important respects.

The development of Japan's urban industrialism has been of such a character that agrarian activities have remained a significant factor in the process.[3] First, the transition from peasant agriculturalism to urban industrialism in Japan has been more rapid than in the older industrialized Western nations. Second, the transition in Japan was subject to a great deal more governmental control and planning than in the West. Japanese political leaders in the late nineteenth century saw industrialization as a means to make of Japan a nation of international significance if strategically important industries—shipbuilding, chemicals, and the like—could be developed rapidly. The capital used for governmental sponsorship of such developments was gained through heavy land taxes. Viewed in this manner, one might say that Japan's industrialization rested firmly upon an agrarian base. National leaders saw the agrarian segment of the population as one of the primary sources of investment capital. So long as agriculture, in the form of land taxes, provided needed income little concern was expressed for the development of agricultural technologies.

Within this context Japanese cities grew and levels of industrial activity rose, but the agrarian population remained relatively stable. The rate of growth of industrialism has been such that it has matched roughly the rate of natural increase of the total population. The agrarian segment of the population, while consistently decreasing in proportion to the total, has accounted for approximately six million households from 1870 to 1955.

The tenacity of a traditional agrarian way of life in Japan, even a present-day highly industrial Japan, has been supported by both governmental policies and economic factors. The accomplishment of nationalistic political aims has meant the utilization of the agrarian population as a source of means to advance industrialization rather than a subject for modernization. Further, the degree of industrial

[3]For detailed presentations of Japan's modernization, see especially E. Herbert Norman, *Japan's Emergence as a Modern State* (New York: Institute of Pacific Relations, 1940), and Hugh Borton, *Japan's Modern Century* (New York: The Ronald Press Co., 1955).

development has been such that only insignificant inroads have been made in the agricultural labor force.

Against this background the presence of agriculturalists or at least an agrarian way of life within Japan's urban population becomes understandable. The urban economy contains two distinct productive systems: the large-scale factory focused upon strategic and export industries, and the household-handicraft system wherein a significant portion of consumer production takes place. The latter type helps to maintain traditions not only of economic production but of family structure and social behavior as well, which are not far removed from the village agrarian way of life. The reservoir of labor represented by the large agricultural population tends to depress standards of living even for the urban labor force; the lowered standards of living mean a caliber of consumer demand which can be met largely by a household-handicraft productive system.

One major consequence is a dependence upon agriculture as a secondary occupation for at least a portion of the urban-based households. Another result is that little pressure is built up for the modernization of agricultural techniques. Improved agrarian methods would mean fewer employment opportunities for agriculturalists, which in turn would increase the labor force supply for an already oversupplied urban-industrial employment system.

In summary, modern Japan displays a social organization evolved from the adjustment of industrialization to a historical scarcity of capital and an overabundance of labor. This adjustment has made for what Taeuber has termed an agrarian-industrial interpenetration. It is to be expected that the Japanese rural-urban population structure will reflect this characteristic. The presence of agricultural activities within Japanese urban areas is therefore visible not only in her largest city but in the total urban structure as well: out of the 248 incorporated cities appearing in the 1950 census of Japan, 67 had 25 per cent or more of their males economically active in agrarian or allied pursuits.

The significance of analyzing the nature of Japanese urban industrialism and the manner of its incorporation of rural agrarian traits lies in its highlighting alternatives to the patterns of Western urban and industrial development. Japanese experience suggests that national advantages of industrialization can be attained without necessarily eradicating traditional forms of social organization. In effect, Japan's modernization was possible precisely because elements of her earlier peasant agriculturalism have been preserved. Tokyo is in its demographic and economic structure an explicit illustration of this preservation.

J. V. D. SAUNDERS

Man-Land Relations in Ecuador*

A broad outline of man-land relations in Ecuador is presented in this paper. This analysis is based upon the personal observations of the author during the period spent in Ecuador as a Fulbright Scholar and also upon published reports, particularly the agricultural census of Ecuador for 1954. The system of minifundia and latifundia introduced at the time of the Spanish conquest is still found on the contemporary scene. Land utilization is affected by size of holdings, and there is a direct relationship between size of holding and the percentage of land employed for pastures and an inverse relationship between size of holdings and the proportion of land given over to cultivation. Large landholdings are used less efficiently than small ones. While there are six land tenure categories in rural Ecuador, three quarters or more of the rural-farm population can best be classified as agricultural laborers. In the highlands, the general characteristic of the systems employed for the remuneration of agricultural labor is that the landowner does not need to pay his laborers cash wages, recompensing them instead by the use of land. Rudimentary plow culture and fire agriculture are the systems of agriculture upon which most reliance is placed for the cultivation of the soil.

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SIZE OF HOLDINGS

The polar extremes of landholdings, latifundia and minifundia, are evident in rural Ecuador and to a significant extent influence the levels of living of the rural population. Latifundia, many of incredible size (25,000 acres or more), dominate the rural landscape in the inter-Andean valleys and on the coastal plains. Minifundia, although common both on the coast and in the highlands, are particularly evident in the latter, where they are exposed to the naked eye as they cling to steep hillsides for heights of several thousand feet above the valley floors. Many of these minuscule tracts are less than one acre in size. No one who beholds the vivid contrast presented in the Ecuadorian highlands between the vast holdings situated in fertile valleys surrounded by "handkerchief"-sized plots which crowd up the mountainsides, and contrasts the mode of life of the large landholder and

*Paper read at the annual meeting of the Rural Sociological Society, Cornell University, August 26–28, 1959.

impoverished Indian or mestizo, can fail to grasp the significance to every phase of rural life of this basic phenomenon.

Fortunately, data on size of holdings were included in the first census of agriculture taken in Ecuador in 1954. These are presented in Table 1. In that year, in the nation as a whole, 73.1 per cent of all holdings were less than five hectares in size and their mean size was 1.7 hectares. They comprised only 7.2 per cent of the area in farms. At the other extreme, properties 1,000 hectares or more in size comprised but 0.2 per cent of the holdings but included 37.4 per cent of the area in farms. The situation with regard to the concentration of landholdings is more critical in the highlands than on the coast. In the former region, properties of 1,000 hectares and over comprise over two-fifths of the area in farms and only a fraction of 1 per cent of all landholdings.

Properties of less than five hectares accounted for 81.7 per cent of the total properties and for only 11.3 per cent of the land in farms. Comparable figures for the coastal area indicate the same pattern in size of holdings but with a less severe concentration of land in large holdings. In that region, properties of 1,000 hectares or more comprise 0.4 per cent of the total holdings and 33.5 per cent of land in farms. Comparable figures for properties of less than 5 hectares are 46.7 per cent and 3 per cent. Expressed differently, in the highlands 2.6 per cent of holdings contain 71.6 per cent of the area in farms. For the coast, the figures are 2.4 and 54.9, respectively.

These figures make evident that the system of large landholdings introduced in the highlands at the time of the Spanish conquest has endured virtually without change to the present day, and that when the coast was colonized these patterns were also introduced there, although in that region they have not developed to the same extent.

A word remains to be said concerning the family-sized farm. If we define broadly the land requirements for a family-sized farm as falling between ten and 200 hectares, or approximately 25 to 500 acres, depending upon soil, climate, and topography, then 15.5 per cent of the nation's holdings fall into this category. For the highlands the figure is 9.0 per cent and for the coast 33.6 per cent.

Size is not the only criterion involved in the concept of the family-sized farm. It is also stipulated that the farmer and his family must perform the bulk of the labor required by the agricultural enterprise. When this criterion is considered, it becomes evident that there are very few family-sized farms in Ecuador. For when sufficient land is acquired for the maintenance of a family at an adequate level of living, the owner then assumes the traditional role of the large landowner, which is one of supervision at best, and proceeds to hire labor to perform the work, perpetuating the system. In terms of attitudes with regard to management and cultivation of the land, there is no

Table 1. Number, size, and area of holdings, by region, Ecuador, 1954*

Size of holdings in hectares	Number	%	Area†	%	Average size‡
		Nation			
All holdings	344,234	100.0	5,999.7	100.0	17.4
Less than 1.0	92,387	26.8	46.0	0.8	0.5
Less than 5.0	251,686	73.1	432.2	7.2	1.7
5.0–9.9	36,250	10.5	271.5	4.5	7.5
10.0–19.9	21,400	6.2	294.3	4.9	13.8
20.0–49.9	19,415	5.9	591.5	9.9	30.5
50.0–199.9	11,779	3.4	1,010.1	16.8	85.8
200.0–999.9	2,999	0.9	1,158.1	19.3	386.2
1,000.0–2,499.99	464	0.1	685.3	11.4	1,476.9
2,500.0 and over	241	0.1	1,556.7	26.0	6,459.3
1,000.0 and over	705	0.2	2,242.0	37.4	3,180.1
		Highlands			
All holdings	259,569	100.0	3,020.4	100.0	11.6
Less than 1.0	83,714	32.3	40.4	1.3	0.5
Less than 5.0	212,153	81.7	341.7	11.3	1.6
5.0–9.9	22,443	8.6	154.7	5.1	6.9
10.0–19.9	10,570	4.1	142.0	4.7	13.4
20.0–49.9	7,772	3.0	220.0	7.3	28.4
50.0–199.9	4,971	1.9	397.3	13.2	79.9
200.0–999.9	1,321	0.5	520.8	17.2	394.2
1,000.0–2,499.9	251	0.1	363.7	12.0	1,499.0
2,500.0 and over	138	0.1	880.2	29.2	6,378.3
1,000.0 and over	389	0.2	1,243.9	41.2	3,197.7
		Coast			
All holdings	84,665	100.0	2,979.3	100.0	35.2
Less than 1.0	8,673	10.2	5.6	0.2	0.6
Less than 5.0	39,533	46.7	90.5	3.0	2.3
5.0–9.9	13,807	16.3	116.8	3.9	8.5
10.0–19.9	10,830	12.8	152.3	5.1	14.1
20.0–49.9	11,693	13.8	371.5	12.5	31.8
50.0–199.9	6,808	8.0	612.8	20.6	90.0
200.0–999.9	1,678	2.0	637.3	21.4	379.8
1,000.0–2,499.9	213	0.3	321.6	10.8	1,509.9
2,500.0 and over	103	0.1	676.5	22.7	6,568.0
1,000.0 and over	316	0.4	998.1	33.5	3,158.5

*Compiled and computed from data in Republica del Ecuador, *Primer censo agropecuario nacional, 1954* (Quito: Dirección General de Estadística y Censos, 1956), Table 3.

†In 1,000 hectares.

‡In hectares. One hectare equals 2.471 acres.

middle group between the large latifundist and the masses of agricultural laborers.

An important phenomenon associated with size of holdings in Ecuador is land utilization. Succinctly put, the fertile valley bottoms in the highlands upon which are located the large estates, and which are most appropriate for agriculture, are generally given over to pastures and grazing, while the slopes and mountainsides are intensively cultivated by the owners of many thousands of small subsistence plots. This not only contributes to a low agricultural production, but also produces extensive soil erosion.[1] The extent of soil erosion in the Ecuadorian highlands is indicated by the following:

> In the inter Andean region of Ecuador...erosion has advanced over almost all areas; more than 90 per cent are worn by natural and man-made erosion, and of this proportion some 85 per cent are severely eroded. The decrease in production is due to this terrible defect, but...many agriculturists and land owners do not yet believe in erosion. Farm land washed away by rainfall can be observed in all parts of the Ecuadorian highlands and these lands have little or no productivity.[2]

Statistical evidence showing the relationship between land utilization and size of holdings is furnished by the 1954 census of agriculture and presented in Table 2. It will be noticed that in both the highlands and on the coast, as the size of holding increases, the proportion of land devoted to pasture increases while the proportion under cultivation decreases. In the highlands, 93.8 per cent of the area of properties of 2,500 hectares or more is devoted to pasture and only 3.1 per cent to cultivation. On the other hand, properties of less than one hectare in the highlands have 90.8 per cent of their area devoted to cultivation and 5.9 per cent in pasture. When it is remembered that the small properties occupy the steep hillsides and that they are intensively farmed by ancient techniques that tend to encourage soil erosion, it becomes evident that the present distribution of landownership contributes substantially to the severe erosion that may be readily observed in all parts of the Ecuadorian highlands.

The fertile bottom lands comprising the large estates are inefficiently used from two standpoints: they are used largely for grazing rather than cultivation and, furthermore, support but a limited number of cattle. Table 3 relates the number of head of cattle per hectare to the size of holdings. Holdings in the highlands of less than one hectare support, on the average, 3.99 heads of cattle in addition to crops.

[1]For a discussion of this phenomenon in Colombia, see T. Lynn Smith, "Land Tenure and Soil Erosion in Colombia." *Proceedings of the Inter-American Conference on the Conservation of Renewable Natural Resources*, (Denver: [Washington] Dept. of State, 1948).

[2]M. Acosta Solis, *Por la conservación de las tierras andinas* (Quito: Editorial Ecuador, 1952), pp. 22–24.

Table 2. Per cent of farmland (exclusive of woodland and waste land) used for pasture, used for cultivation, and lying fallow, by size of holding and region, Ecuador, 1954*

Size of holdings in hectares	Pasture	Cultivation	Fallow
	Nation		
All holdings	53.2	36.4	10.4
Less than 1.0	5.4	90.3	4.3
Less than 5.0	12.4	80.9	6.7
5.0–9.9	23.7	66.0	10.3
10.0–49.9	37.4	48.6	14.8
50.0–99.9	46.1	39.5	14.4
100.0–499.9	59.4	28.2	12.4
500.0–999.9	69.4	20.1	10.5
1,000.0–2,499.9	72.7	16.1	11.2
2,500.0 and over	84.0	10.5	5.5
	Highlands		
All holdings	60.6	33.4	6.0
Less than 1.0	5.9	90.8	3.3
Less than 5.0	13.5	81.8	4.7
5.0–9.9	28.8	64.8	6.4
10.0–49.9	44.2	47.0	8.8
50.0–99.9	49.7	40.5	9.8
100.0–499.9	65.9	24.7	9.4
500.0–999.9	80.8	13.6	5.6
1,000.0–2,499.9	86.7	8.2	5.1
2,500.0 and over	93.8	3.1	3.1
	Coast		
All holdings	44.5	39.8	15.7
Less than 1.0	2.0	86.0	12.0
Less than 5.0	7.9	77.4	14.7
5.0–9.9	17.0	67.5	15.5
10.0–49.9	32.8	49.7	17.5
50.0–99.9	44.2	39.0	16.8
100.0–499.9	55.3	30.4	14.3
500.0–999.9	57.4	27.0	15.6
1,000.0–2,499.9	52.9	27.2	19.9
2,500.0 and over	60.2	28.4	11.4

*Compiled and computed from data in Republica del Ecuador, *Primer censo agropecuario nacional, 1954* (Quito: Dirección General de Estadística y Censos, 1956), Table 3.

Table 3. Number of heads of cattle per hectare and by size of holding by region, Ecuador, 1954*

Size of holdings in hectares	Heads of cattle per hectare		
	Nation	Highlands	Coast
All holdings	0.26	0.31	0.21
Less than 1.0	3.99	3.87	8.58
1.0–4.9	1.08	1.10	1.55
5.0–9.9	0.58	0.56	0.71
10.0–19.9	0.49	0.52	0.43
20.0–49.9	0.34	0.38	0.31
50.0–99.9	0.28	0.32	0.25
100.0–199.9	0.27	0.29	0.25
200.0–499.9	0.21	0.23	0.19
500.0–999.9	0.19	0.21	0.17
1,000.0–2,499.9	0.13	0.13	0.13
2,500.0 and over	0.06	0.06	0.07

*Compiled and computed from data in Republica del Ecuador, *Primer censo agropecuario national, 1954* (Quito: Dirección General de Estadística y Censos, 1956), Table 26.

Holdings of 2,500 hectares or more, with over 90 per cent of their area devoted to pastures, support only 0.06 heads per hectare, or 66 times less. On the coast this relationship is also present, and the 0.07 heads of cattle per hectare on properties of 2,500 hectares or more is more than 100 times smaller than the average of 8.58 heads of cattle reported per property less than one hectare in size.[3] On the coast, many large holdings devote a considerable proportion of their area to export crops, notably cacao, bananas, and coffee. One might suspect that in this region the decreasing utilization of land for grazing that accompanies an increase in size of holding is accompanied by an increase in the utilization of land for these other crops. The figures, however, do not support this contention. The number of trees per hectare for both cacao and coffee decreases with an increase in size of holding. Furthermore, production per hectare decreases for both bananas and rice as size of holding increases. There would seem to remain little doubt that in both coast and highlands the large land holdings are utilized far less intensively than the small ones. This also applies when tenure is held constant.

[3]It is likely that the number of head of cattle was over-reported for the "less than 1.0 hectares" category on the coast.

This problem was pointed out in 1953 by an anonymous and perceptive writer for the Economic Commission for Latin America:

> Even though findings are lacking that will allow an exact idea of the productive efficiency of the great haciendas of the highlands to be made, compared to that of medium and small sized properties, the very fact that the former allow more than 50 per cent of their agricultural lands to lie fallow, while the latter, almost without exception are cultivated over their entire extension, makes evident the fact that the existence of the great haciendas is not always beneficial to the country. On the coast, special studies are not required to confirm the existence of great haciendas that are poorly exploited, and on occasion even semi-abandoned. . . . Many are not adequately exploited for lack of capital or of an enterprising spirit. . . . Other haciendas are poorly exploited because their owners have acquired them simply as an investment with which to hedge against inflation.[4]

LAND TENURE

The 1954 census of agriculture of Ecuador gathered information which throws light upon the different tenure classes. It will be well, however, to consider tenure classes in Ecuador before going on to an examination of the census data.

In the farm operator category are to be found owners and managers. These categories are not substantially different in their characteristics from those in other parts of the world except, perhaps, that the manager, or *mayordomo,* is usually ill equipped intellectually to make the best use of his land.

Another tenure category subsumed under that of farm operator is that of the *comunero.* The *comunero* is a member of an Indian community (*comuna*) that, in accordance with ancient custom, is given the right to use a parcel of commonly held land for cultivation. He also has the right to share the use of the grazing lands of the *comuna,* which are used in common. *Comuneros* are found almost exclusively in the highlands.

Cash renters (*arrendatarios*) rent land in return for a cash payment. This arrangement is widely practiced, particularly on the coast, in the planting of bananas.

Share renters (also *arrendatarios*), who give a fraction of the crop in payment for the use of the property, are to be found associated especially with rice cultivation on the coast.

"Nomadic" standing renters cultivate rice in a different location on the coast each year, paying a fixed amount of the product per hectare for the use of the land.

[4]Comision Economica para America Latina, *La producción agropecuaria en la economia del Ecuador.* Informe realizado por la División Agricola de la CEPAL en colaboración con la Organización de las Naciones Unidas para la Agricultura y Alimentacion (Quito: Septiembre de 1953), p. 12.

In addition to these farm operator categories, a number of farm laborer categories may also be distinguished.

The *huasipunguero* is paid partly in wages (in theory) and partly by the use of a small parcel of land (*huasipungo*) and house (the house, ironically, is built and maintained by the (*huasipunguero*). In practice the monetary compensation is minimal or nonexistent. The *huasipunguero* is expected to work for the *patron* or landowner for a certain number of days of each week, generally four, in payment for use of the parcel of land or *huasipungo*. The balance of his time is spent cultivating his parcel or, perhaps, working for the landowner for a cash wage. This tenurial arrangement is found almost exclusively in the highlands. It is, in effect, a form of the medieval socage tenure.

Sharecroppers (*aparceros* or *partidarios* in the highlands, *aparceros* or *sembradores* on the coast) cultivate a parcel of land giving half of the crop to the landowner in payment for the use of the land. Sharecropper and landowner contribute the seed jointly. In addition, the sharecropper is expected to make certain improvements on the property or work for the landowner for a given number of days. Sharecroppers generally are owners of minifundia who cannot eke out an existence from their minuscule plot of land. This tenurial arrangement is far more common in the highlands than on the coast.

The *yanapero* utilizes land not for cultivation, but to gather firewood and water and to graze a few animals. In return he works a given number of days for the landowner. *Yanaperos* are usually *comuneros* who are unable to exist from the returns of their land alone, or are owners of minifundia who face the same difficulty.

Finally, the wage hand (*montuvio*), particularly common on the coast, receives a cash daily wage in return for his labor. These are recruited locally on a year-round basis. During harvesting seasons, particularly for rice, their numbers are swollen by migratory agricultural labor from the highlands.

In the highlands, the general characteristic of the systems employed for the remuneration of agricultural labor is that the landowner does not need to pay his laborers cash wages, recompensing them instead by the use of land. Thus, in the case of the *huasipunguero*, the landowner is assured an adequate labor force at no out-of-pocket cost, for the large holdings always have uncultivated lands that can be given over to *huasipungueros* who will work in return for use of the unused land. This situation does not encourage the landowner to increase productivity per worker by the use of modern agricultural technology and farm machinery. Apparently the labor is free and those changes would mean a larger capital outlay and would force him to manage his lands personally in the absence of qualified supervisory personnel. Thus, a concentration of landholdings in a few hands, in combination

with an abundant supply of labor that is paid for by the use of excess land, contributes powerfully to the survival of a labor-consuming and inefficient agriculture and of a rural social system which presupposes large proportions of agricultural laborers in the rural population.

Table 4 permits some idea to be gained of the relative importance of these tenure classes.

A word concerning the *colono* category is in order. *Colono* means, in essence, in this case, colonist, or one who is in search of a better life and who farms land for the first time. Unfortunately, the tenure rights of such *colonos* are not spelled out and, furthermore, together with them is included a miscellaneous "other" category making it impossible to draw any conclusion from these figures.

It is evident that the many owners and *comuneros* who have but pitifully small holdings more properly belong in the agricultural laborer category than in the owner-operator category. It is not unreasonable to consider, particularly in the highlands, that all properties of less than five hectares are insufficient for the maintenance of a family even at reduced levels of living, and that all owners or *comuneros* occupying such properties depend primarily upon work for others for their subsistence and are, in effect, laborers.

If this criterion is adopted, then approximately 73.1 per cent of all families having some right to land, however tenuous, belong in the agricultural laborer category. This does not include the unknown quantity of wage hands with no rights in the land who live primarily on the coast. This fact no doubt accounts in part for the much lower proportion of agricultural laborers (as defined in this manner) in the coastal area. Of the other tenure classes the *huasipunguero* is the most numerous in the highlands, followed by sharecroppers, renters, and *comuneros,* in that order. On the coast renters occupy first place, after agricultural laborers, and are proportionately three times more numerous than in the highlands. They are followed by *comuneros,* sharecroppers, and *huasipungueros.* The "mixed" category and the "*colono* and other" category remain, unfortunately, unknown quantities.

The 1954 census of agriculture did not include the Oriente, a vast and almost unpopulated region (46,471 persons in 1950) containing half of Ecuador's land area. It should also be mentioned that the census regions of Ecuador do not conform exactly to the natural regions, which accounts in large measures for the presence of the *comunas,* an essentially Andean trait, in the census coastal region.

SYSTEMS OF AGRICULTURE

In the highlands, rudimentary plow culture, characterized by the use of the wooden ox-drawn plow as the main instrument for preparing the soil for cultivation, still holds sway as it has since shortly after

Table 4. Number and per cent of farms and proportion of farms with less than five hectares, by tenure classes and region, Ecuador, 1954*

Tenure	Farms		% of farms with less than 5 hectares
	Number	%	
	Nation		
All classes	344,234	100.0	73.1
Owners	233,900	67.9	71.1
Renters	17,038	4.9	71.1
Sharecroppers	13,336	3.9	84.2
Huasipungueros	19,747	5.7	86.7
Comuneros	5,778	1.8	83.4
Colonos and others	23,783	6.9	74.7
Mixed	30,652	8.9	73.2
	Highlands		
All classes	259,569	100.0	81.7
Owners	174,023	67.0	81.9
Renters	8,012	3.1	70.0
Sharecroppers	12,885	5.0	85.3
Huasipungueros	19,665	7.6	86.7
Comuneros	4,863	1.9	87.0
Colonos and others	12,829	4.9	82.6
Mixed	27,292	10.5	77.5
	Coast		
All classes	84,665	100.0	46.7
Owners	59,877	70.7	39.6
Renters	9,026	10.7	72.1
Sharecroppers	451	0.5	53.2
Huasipungueros	82	—†	91.5
Comuneros	915	1.1	64.5
Colonos and others	10,954	12.9	65.5
Mixed	3,360	4.0	37.6

*Compiled and computed from Republica del Ecuador, *Primer censo agropecuario nacional, 1954* (Quito: Dirección General de Estadística y Censos, 1956), Table 4.

†Less than 0.1 per cent.

the conquest, when this instrument, introduced by the Spaniards, partially replaced the digging stick. Nevertheless, the hoe or digging stick still predominates on the thousands of munifundia that cover incredibly steep hill and mountainsides with a colorful quiltwork.

Ox-drawn carts, which one might expect to find associated with this system of agriculture, are rare, probably because of the rugged terrain which makes use of this impractical and unwieldy vehicle difficult, and because of the low productivity per agricultural worker which gives him a small surplus to invest in the animal and cart. Mules, donkeys, men, women, and children are the principal bearers of burden in agricultural areas although there is some trucking along the few main highways.

Agriculture on the coast is almost exclusively dependent upon the machete and *espeque,* the denomination given the digging stick in this area, for the preparation of the soil. Virtually the only plows to be seen are those pulled by the small number of tractors to be found in the region. The rudimentary ox-drawn wooden plow did not diffuse into coastal areas from the highlands. Furthermore, the three major commercial export crops of the coast—coffee, cacao, and bananas—are not easily amenable to mechanization. The greatest degree of mechanization on the coast undoubtedly occurs with reference to rice and sugar cane although, even so, it is slight.

Transportation in the coastal region during the rainy season is largely dependent upon the many rivers which course it. Indeed, the more agriculturally developed coastal regions are those which are best served by these liquid highways. Much of the coastal area is inaccessible for five months of the year because heavy rainfalls make the dirt roads which cross it impassable. Overland transportation is then largely restricted to mules and horses.

Fire agriculture, in which fire is relied upon for the preparation of the soil for planting, and in which the machete and digging stick are the principal tools, is widely practiced in coastal Ecuador, as in other parts of the tropical belt which surrounds the world.[5] This highly inefficient system of agriculture results in a severe depletion of soil resources, first through the burning of organic matter in the soil and second from the severe leaching to which the exposed soil is subject in this area of heavy rainfall. This erosion, essentially resulting from the nature of man-land relations, is severe on the coast. Being chemical erosion it is not as dramatic as the pluvial erosion of the highlands which lays waste to great acreages, but is just as damaging in terms of reduced productivity. At the end of the dry season, at which time the underbrush and other vegetation felled with the

[5]For an extensive discussion of fire agriculture, see T. Lynn Smith, *Brazil: People and Institutions* (rev. ed.; Baton Rouge: Louisiana State University Press, 1954), ch. 3.

machete soon after the end of the rainy season are burned, one may see many burned-over parcels of land in the southern and most productive part of the coast, particularly in areas not dominated by large landholdings.

It is probable that mechanized agriculture *per se* is not practiced in Ecuador. Nevertheless a trickle of tractors has been imported over the years. Over the 12-year period from 1940 to 1951, 930 "agricultural" tractors were imported, an average of only 77.5 tractors per year. Assuming that all of these were in service in 1951 (50 per cent would be more realistic, because of the rapid deterioration of farm machinery through misuse and nonuse), there would result a ratio of one tractor per 677 hectares or 1,673 acres of land in permanent cultivation. The actual figure is probably double. Again, assuming that all 930 tractors were in use in 1951, it maybe calculated that 5.5 per cent of permanent cropland was cultivated mechanically to some extent during that year.[6] It does not seen likely that those proportions have been radically changed since that date.

CONCLUSION

Basic changes in man-land relations will likely be slow in coming to the Ecuadorian highlands with their feudal panorama and fantastic geographical setting. The pattern has remained basically the same for the four hundred years that have elapsed since the Spanish conquest, and may well so remain for four centuries more. The factors that contribute to the survival of a system of man-land relations such as that described are many and powerful.

The coastal area presents a somewhat different social panorama that is more conducive to change. The presence of a vocal and less docile non-Indian population which is an integral part of the national culture provides an environment more susceptible to social change in rural areas. More importantly, the shortage of labor on the coast, in combination with the cultivation of highly profitable commercial export crops, has raised the wage level of the coastal wage hand to two or three times that of his Andean counterpart and stimulated the application of improved agricultural techniques.

High land values on the coast, in combination with an effectively enforced land tax, have forced either the utilization or sale of unused portions of some large landholdings. In the province of Los Rios a number of large properties have undergone *parcelamento* or subdivision. The new lots are sold in sizes of 100 *cuadras* (178.5 acres) and up. To the owner, who is faced with a tax of approximately 0.5 per cent to 0.6 per cent of assessed valuation (generally about one-half of the real value), sale of unused portions of his land represents a

[6]Comision Economica Para America Latina, *op. cit.*, p. 21.

substantial saving and in times of tight agricultural credits or poor market conditions a much-needed boost for his operating capital. It would be difficult to say how many lots have been sold in this manner. However, these sales seem to have had some impact on the region and one-half or more of the area of some properties is now being sold in this manner. A significant feature of this development is that land in this area is readily available for purchase in moderate-sized lots whereas in the highlands the land that is occasionally offered for sale is almost always offered in large tracts.

Also contributing to change are European markets, particularly for the small independent banana grower, as well as strong world markets for cacao and coffee, that assure the small landholder quick and profitable returns for his investment. Sizable indebtedness can sometimes be repaid even at high interest rates in surprisingly short periods.

Commercial land division schemes, or *parcelamentos agricolas*, near Guayaquil, the main coastal city, also hold promise as agents of change. These lands in the vicinity of the city, instead of being held for speculative purposes, are being subdivided into farms and advertised for sale in a manner similar to that employed by residential developers in the United States.

Research Notes

RURAL MIGRATION

THE recently introduced scheme of financial assistance to small farmers in the United Kingdom has again drawn the public's attention to the fact that not everything is happy and serene in the countryside. Similar difficulties exist in other countries. But although the economic aspects of farming are discussed fairly often, we seldom hear of the human issues involved. It is for the purpose of creating a meeting ground for those interested in the welfare of the farm population that the European Society for Rural Sociology was founded in November, 1957.

The Society had its first congress in September, 1958, in the old university town of Louvain, Belgium. The opening and closing sessions were held in the precincts of the Brussels World Exhibition, and the opening address was delivered by Belgium's Minister of Agriculture. Apart from these formal touches, however, the debates were conducted in an atmosphere independent of any government influence and—with the exception of an F.A.O. delegate—all the participants, who came from nearly all the noncommunist countries of Europe, were there in a personal capacity, not as official delegates. The present article attempts to summarize some of the views expressed and conclusions reached during the congress.

Probably the most tangible and measurable symptom of the unsettled conditions in Europe's countryside is rural migration; it is understandable, therefore, that this was chosen as the general theme of this first congress. The extent of rural migration is so great that it must surely be counted as one of the principal social problems of our time. For example, overseas emigration alone accounts for nearly two million farmers and farm workers who left the rural areas of ten western European countries between 1918 and 1954. Looking further into the past, we learn that since 1845 Ireland's rural population has declined by two-thirds and there has been a smaller, though still substantial, exodus from the countryside of most European nations. In Great Britain the present number of people in rural occupations has been estimated as about four-fifths of the prewar total.

Such figures do not give a full measure of rural migration, for there has also been a considerable movement of rural people to farms in distant parts of their own country, as in the case of Bretons who leave their home area, where many farms are too small to maintain a family, for the better opportunities in other regions of France. On the other hand, people who leave one country's agriculture often take up farming again on arrival abroad; in fact, this was done by 75 per cent of those European agriculturists who emigrated

overseas between 1951 and 1957, and it seems likely that the bulk of the 50,000 immigrants who are now farming in France have come from agricultural occupations in their countries of origin.

Nevertheless, in many countries there is a definite movement of people from agriculture into town employment. The causes of this trend have been classified into "push" and "pull" factors. The "push" comes from the fall in farm labor requirements, owing mainly to mechanization, to yield increases resulting from technical progress which are not matched by increased demand for farm products, and to the amalgamation of holdings. Although national income has been rising, only a small part of the rise is being spent on extra foodstuffs, and even some of these are imported from abroad. Consequently, with the increased productivity of labor, the nation's demand for food can be met without employing all those who are born and bred in the countryside. But it is not only the redundant farm workers, and farmers' sons and daughters unable to find work in agriculture, who seek employment in towns. The town exercises its "pull" also on those whose livelihood would be assured if they chose to remain on the land. There is the lure of better living conditions, of higher incomes, and of a greater choice of jobs for those yearning to use their intelligence and education in day-to-day work.

There are, however, countries such as Holland, Ireland, and Italy in which, because of overpopulation or underindustrialization, those leaving their farms or agricultural jobs cannot easily find employment in cities or cannot expect the town jobs to provide the anticipated style of life; hence the urge to emigrate abroad. For the Irish, England and the United States have been the traditional emigration countries. Many Dutch agriculturists have settled on the land in Canada, where the recent difficulties of marketing the wheat crop have caused some of them to take up market gardening instead of other forms of farming. Australia has attracted many rural migrants from Italy and Holland, and the already existing emigration from these countries to Belgium, France, and Germany may be expected to intensify as a result of the free movement of workers, stipulated by the Common Market Treaty.

Whereas migrations discussed so far are due chiefly to economic causes, one cannot talk about the movement of rural people without mentioning those who have been expelled or who have escaped for political reasons. Probably the largest group among these consists of 300,000 farmers who, together with their families, have moved into western Germany from regions taken over by Poland and Czechoslovakia and from eastern Germany. It is a measure of the difficulties encountered in absorbing these migrants that only one-tenth of them are now farmers, most of the others having to work as employees (though some of these do agricultural work, often part-time).

This kind of mass migration is fortunately an exception rather than a rule, at least in the noncommunist countries. Nevertheless, the change in living conditions is often just as dramatic when rural people move into town voluntarily. The results of a Finnish survey point particularly to the difficulties of social adjustment in large towns.[1] Rural migrants seem to adapt themselves more easily to life in a small town, where they soon join in the social activities.

[1]F. Jyrkila, *Effects of Migration on the Adjustment of Finnish Youth*, First Congress of the European Society for Rural Sociology, Section on Rural Migration (Bonn: privately published, 1959), pp. 173–176.

Observations made in a newly reclaimed *polder* in the northeastern Netherlands present an interesting variant of the psychological effect of migration. With the change of residence has come a change in social customs. Villages are acquiring an urban character and serve as cultural and social centers, attracting people from fairly distant farms, who come to meet their coreligionists there, if similar opportunities do not exist in their own village. Thus, social life is no longer confined to the farmers' immediate neighborhood.

Farm-to-farm migration creates difficulties of integration which may be as serious as those encountered in rural migration to towns. In Italy and Ireland, for example, there are profound differences in culture and outlook between different parts of the country, and in the rural areas of southwestern France, Italian immigrants are said to integrate more easily than Bretons. It is fortunate that women, with their natural adaptability, help to overcome the difficulties of social adjustment.

Despite its various drawbacks, rural migration has important advantages, not only to the national economy which benefits from this move toward a more rational distribution of manpower, but also to the countryside itself, where the departure of small farmers creates opportunities for enlarging uneconomically small holdings and where the loss of workers stimulates mechanization. On the other hand, the "receiving" agricultural areas benefit from the zeal of the newcomers who often bring new and useful methods of cultivation and management or take over land which would otherwise remain unused.

Nevertheless, the fact remains that many people choose migration as the lesser of two evils, rather than as an ideal solution. Therefore, some rural sociologists claim that where the existing population is not in excess of rural labor requirements, amenities such as education, transport, and so forth should be improved in order to encourage people to stay in the countryside. When rural labor is in oversupply, it has sometimes been argued that light industries should be brought to the countryside. A closer investigation of the economics of such a proposition is needed before its merits can be judged, but there would be the advantage of relieving some of the congestion of big cities which seem to grow ever larger with the influx of rural migrants.

These and other measures, designed to regulate rural migration for common benefit, imply some degree of public intervention. Thus, the prospective migrants need advice on the choice of employment and district. Suitable occupational training should be given to those leaving agriculture; otherwise there is a danger of their swelling the ranks of the unskilled town workers, who are the most vulnerable to unemployment. The needs of rural migrants, as well as of the remaining rural population, should be taken into account in formulating the housing policy. There may be a case for encouraging the abandonment of those villages which are too small to maintain an adequate social life or too remote for the provision of modern amenities without an excessive outlay of public money. Where the need for migration arises from an exceptionally high rate of natural population increase, education in family planning may be desirable.

Individual migrants can help themselves by exploring the new district and contacting their new neighbors in advance. French experience indicates that group migration is undesirable as it makes integration more difficult.

Some of these recommendations are based on practical experience of existing

schemes. Several countries have helped rural migrants who move to farms in distant areas, by providing grants, loans, and advice. Others—as for example, Ireland—have set up new holdings, but some of these may be criticized on the grounds of their size being insufficient to ensure a standard of living expected by the modern family.

One day of the congress proceedings was devoted to a tour of the Campine region of North Belgium, where farmers displaced by new industries and by military bases are being settled by the joint effort of the state and of the Society of Small Property Owners. This project, which covers 1,200 acres of former crown lands consisting in part of reclaimed woodland and marshes, provides an interesting example of regulated rural migration.

The congress also discussed problems associated with two other types of migration: the movement of seasonal farm workers and the movement of city workers who choose to live in the country. The latter subject led logically to the consideration of urban overspill, caused when large numbers of city workers wish to live on the rural fringe, and it was here that town planners came into their own. This joint consideration of problems by town planners and Rural Sociologists is an encouraging symptom. By drawing into its debates people from other fields, the European Society for Rural Sociology may contribute to a wider understanding of the problems of the countryside, and this may lead the community to take measures which will increase human welfare and happiness both in rural and urban areas.

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PERSONAL AND SOCIAL ADJUSTMENT OF NEGRO CHILDREN IN RURAL AND URBAN AREAS IN THE SOUTH

THIS paper presents the results of an investigation designed to determine the relationship between personal and social adjustment of rural and urban Negro children. This study is based on the null hypothesis that the personality characteristics of children living in rural areas are the same as those for children residing in urban areas.

There are several studies concerned with the personality adjustment of Negro children living in urban areas,[1] but few, if any, studies exist which deal

[1]See, for example, W. E. Anderson, "Personality Characteristics of 153 Negro pupils, Dunbar High School, Okmulgee, Oklahoma," *Journal of Negro Education*, XVI (1947), 44–48; Roderick Pugh, "A Comparative Study of the Adjustment of Negro Students in Mixed and Separate High Schools," *Journal of Negro Education*, XII (1943), 607–616; T. L. Engle, "Personality Adjustment of Children Belonging to Two Minority Groups," *Journal of Educational Psychology*, XXVI (1945), 543–560; B. M. Hindman, "The Emotional Problems of Negro High School Youth Which Are Related to Segregation and Discrimination in a Southern Urban Community," *Journal of Educational Sociology*, XXVII (1953), 115–127; R. E. Carroll, "Relation of Social Environment to the Moral Ideology and the Personal Aspirations of Negro Boys and Girls," *School Review*, LIII, (1945), 30–38.

with Negro children in a rural-urban setting. This investigation was undertaken with the idea of providing limited information on the subject.

METHODOLOGY

The data were obtained in the spring of 1957 from 150 students, selected at random, enrolled in the eleventh and twelfth grades in two North Carolina high schools. The urban school was located in the capitol city of the state with a population of 66,679. The rural school was located in a town about twenty-five miles from the city, with a population of approximately 1,378. The United States Bureau of the Census designates any place, incorporated or unincorporated, with less than 2,500 inhabitants as rural and any place incorporated, with 2,500 or more persons as urban, but because of the increased rate with which people move around, the vast dispersion of communications, and the confusion among authorities attempting to determine a rural or urban residence, it was theorized that an individual who had spent the first ten years of his life in one of the respective areas had acquired the general characteristics, habits, and customs of his particular community. Consequently, students who had not lived in the rural or urban regions for the first ten years of their lives were excluded in this investigation.

Personal and social adjustment was measured by employing the *California Test of Personality* (secondary grades nine to college, 1953 revision). The first part of the test measured personal adjustment based on feeling of personal security: self-reliance, sense of personal worth, sense of personal freedom, feeling of belonging, withdrawing tendencies, and nervous symptoms. The second part measured social adjustment based on feelings of social security: social standards, social skills, antisocial tendencies, family relations, school relations, and community relations. While this instrument is reported to be one of the best standardized pencil-and-paper tests for measuring personality, the chances are it provides only a crude estimate of underlying personality structure. Nevertheless, the test is probably dependable, inasmuch as it has a reliability coefficient of .93.

The authors of the test claimed that scores equivalent to low percentiles were evidence of difficult adjustment, and scores equal to high percentiles were an indication of acceptable behavior or attitudes. Therefore, the data were examined in terms of scores above the 75th percentile, those falling between 75th and 25th percentiles, and those falling below the 25th percentile. Analysis was also made on the basis of trait mean scores and corresponding percentile ranks. The *t*-ratio was used to test the significance of difference between group means.

ANALYSIS OF DATA

The patterns of personal, social, and total adjustment were nearly the same percentage-wise for both rural and urban students. More than 50 per cent of both groups fell between the 25th and 75th percentiles, with about one out of every four students placing below the 25th percentile, and slightly more than one out of every eight members scoring above the 75th percentile. When the *t*-ratio was computed for the real difference between mean scores on personal, social, and total adjustment, none were significant at the .05 level. Consequently, the null hypothesis was accepted.

Although no true difference between rural and urban adolescents mean adjustment scores were evident, there was variation between them on the components of each half of the test. In Table 1 appear the mean scores and corresponding percentile ranks for each trait on personal and social adjustment.

Table 1. Comparison of rural and urban Negro students according to mean scores and corresponding percentile ranks made on parts of the *California Test of Personality*

Traits	Rural		Urban	
	Mean score	Percentile rank	Mean score	Percentile rank
Personal adjustment				
Self-reliance	11	70	11	70
Sense of personal worth	13	60	13	60
Sense of personal freedom	11	30	12	40
Feeling of belonging	12	30	13	50
Withdrawing tendencies	11	40	10	30
Nervous symptoms	12	60	11	50
Social adjustment				
Social standards	14	60	14	60
Social skills	11	40	12	50
Antisocial tendencies	11	30	11	30
Family relations	12	40	12	40
School relations	11	40	11	40
Community relations	12	50	11	40

Personal adjustment: Rural students were above the percentile norm in self-reliance (the ability to direct one's own activities independently),[a] sense of personal-worth (the belief that one is favorably thought of by others and that he possesses at least average intelligence), and nervous symptoms (emotional difficulties such as eye strain, loss of appetite, and insomnia).

Urban students were above the percentile norm only in self-reliance and sense of personal worth. They were equal to the norm in nervous symptoms and feeling of belonging (the experience of acceptable interpersonal relations with friends and love from one's family). With rural students this quality was below normal.

Both groups were below the percentile norm in sense of personal freedom (the belief that one's activities and fundamental experiences of life are determined in a sensible, free atmosphere) and withdrawing tendencies (tendency

[a]The definitions of the traits were obtained from the *Manual of Directions, California Test of Personality*, 1953 Revision (California Test Bureau, Los Angeles, Cal.)

to be sensitive, timid, lonely, and living in a world of fantasy). For the first half of the test both groups had mean scores that were below the percentile norm.

Social adjustment: The rural students were above the norm in social standards (recognition of the wishes of others and understanding of acceptable and unacceptable behavior in group activities) and community relations (good social adjustment with the members of one's neighborhood, a high opinion of the neighborhood, and the practice of abiding by its rules and regulations).

Urban students were also above the norm in social standards and equal to it in social skills (the ability to be skillful in association with well-known and unknown individuals).

The rural and urban groups were below the norm in traits of antisocial tendencies (characteristics of destruction, disobedience, quarrelsomeness, and being unfair), family relations (favorable relations with members of one's family which promote a feeling of security), and school relations (a satisfactory association with peers and teachers and an understanding of one's abilities in terms of academic responsibilities).

The rural students were below the norm in social skills whereas the urban group was below in community relations. With respect to social adjustment each group was below the percentile norm for this part of the test.

These data suggested that rural students were superior to urban students in their adjustment to nervous symptoms and community relations. Urban students tended to be better adjusted to feelings of belonging and social skills than were rural students. Both groups showed an acceptable degree of adjustment in self-reliance, sense of personal worth, and social standards. Rural and urban children gave evidence of being equally poor in their adjustment to a sense of personal freedom, withdrawing tendencies, antisocial tendencies, family relations, and school relations.

CONCLUSIONS AND IMPLICATIONS

This investigation was predicated upon the hypothesis that no true difference existed between the personality adjustment of rural and urban Negro children as measured by the *California Test of Personality*. The null hypothesis was sustained.

No conclusive evidence was present to indicate that the nature of the community in which Negro children lived was a deciding factor with regard to establishing some distinctive pattern of personal or social adjustment. On the other hand, rural and urban students demonstrated certain behavior traits which were different from each other. Therefore, it may seem reasonable to believe that the specific community did influence certain elements of behavior described in the test.

The instrument was probably most effective in showing the similarities of rural and urban Negro children in their characteristics of unacceptable behavior or attitudes: sense of personal freedom, withdrawing tendencies, antisocial tendencies, family relations, and school relations. This may implicate the society in which they lived.

The complexity of this situation may be readily discernible if it is recognized that certain geographic locations in the United States impose additional limitations on the personality development of these youth. The majority of

Negro students are enrolled in separate schools in the South and many personality difficulties are influenced by discriminatory practices, injustices conceived and experienced,[3] racial stigmas,[4] color valuations in interracial attitudes and relations, "avoidance" practices,[5] and the whole matter of social acceptance or rejection by the majority culture.

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[3]Abraham Ehrenfeld, "Some Sociological Factors Affecting the Behavior Patterns of Negro Pupils," *High Points*, XXVII (1945), 25–30.

[4]Davis Allison, "Racial Status and Personality Development," *Scientific Monthly*, LVII (1943), 354–362.

[5]Robert Sutherland, *Color, Class and Personality* (Washington, D. C.: American Council on Education, 1942), p. 73.

THE ADOPTION PERIOD*

THE adoption of an innovation by an individual has come to be viewed as a multi-staged process.[1] The first step in this process occurs when the individual becomes aware that the innovation exists. He then develops interest, evaluates, tries, and perhaps adopts the innovation.

Rural sociologists have concentrated their research efforts on the investigation of factors related to the time at which a farmer adopts a new idea relative to the time at which other farmers adopt the same idea. Farmers have been categorized as innovators, early adopters, early majority, late majority, and laggards on the basis of their relative time of adoption.[2]

The time dimension is also involved in another aspect of the adoption process which has not been carefully explored to date. The dimension is the period of time which an individual requires to pass through the adoption process, that is, from awareness to adoption. This length of time required for the adoption process to take place is called the *adoption period.*

Extension workers, agricultural missionaries, salesmen, and other change agents wish to speed up the process by which innovations are adopted. One method is to communicate more adequately information about new ideas so as to create awareness at an earlier date. Another method is to shorten the amount of time required for adoption after an individual is once aware of a new idea.[3] In fact, there is little evidence that lack of knowledge about

*This article was originally presented as a paper at the 1959 meetings of the Rural Sociological Society at Ithaca, New York. The author wishes to thank Robert M. Dimit and Joseph T. Crymes for their help in the development of this article.

[1]George M. Beal, et al., "Validity of the Concept of Stages in the Adoption Process," *Rural Sociology*, 22 (1957), 166–168; James H. Copp, et al., "The Function of Information Sources in the Farm Practice Adoption Process," *Rural Sociology*, 23 (1958), 146–157; and Everett M. Rogers, *Social Change In Rural Society* (New York: Appleton-Century-Crofts, 1960), pp. 402–403.

[2]Everett M. Rogers, "Categorizing the Adopters of Agricultural Practices," *Rural Sociology*, 23 (1958), 345–354.

[3]A longer period of years is generally required for the period from awareness to trial than for the period from trial to adoption. Adoption usually follows the trial

innovations actually delays their adoption.[4] Nonadopters are often aware of an innovation but are not motivated to try out and adopt it. Ryan and Gross[5] reported that almost all of the Iowa farmers in their study had heard about hybrid seed corn before more than a handful were planting it.

The purpose of this article is to investigate the role of the adoption period in adoption behavior.

METHODOLOGY

Personal interviews were conducted with a state-wide random sample of 104 "commercial" farmers in Ohio in 1957. Respondents were asked (1) in what year they first heard about and (2) in what year they first used 25 new farm practices. By subtracting the year of adoption (first used) from the year of awareness (first heard about), the length of the adoption period in years was computed for each of the 25 practices.[6] The time measure of the adoption period is crude (only to the nearest year) but is probably sufficient for present purposes. Typical innovations were new crop varieties, weed sprays, livestock disease control methods, artificial insemination, bulk milk tanks, and feed additives.

In addition to the Ohio study, data are utilized from several other studies cited below.

FINDINGS

The average length of the adoption period varied widely among different farm practices (Table 1). One reason for this variation may be found in the intrinsic nature of the practice itself. Some new practices are relatively simple in nature, divisible for trial, and compatible with the farmers' past experiences; the results are visible and possess a relative advantage over previous practices. A brief inspection of the data suggests that these innovations were more readily adopted and their adoption periods were shorter. For the sake of the present analysis, however, differences among the farm practices studied in Ohio were standardized.[7] The main dimension of analysis is the farmer differences in length of adoption period, rather than differences in adoption period among different practices.

1. Farmers vary widely as to the length of the adoption period.[8] For exam-

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stage rather directly. Thus, efforts to encourage the trial of innovations may act to speed up the adoption process.

[4]Eugene A. Wilkening and Frank A. Santopolo, *The Diffusion of Improved Farm Practices from Unit Test-Demonstrations Farms in the Tennessee Valley Counties of North Carolina* (North Carolina, State College Agr. Expt. Sta. Rpt., Raleigh, 1952 [mimeo.]), p. 31.

[5]Bryce Ryan and Neil C. Gross, "The Diffusion of Hybrid Seed Corn in Two Iowa Communities," *Rural Sociology*, 8 (1943), 15–24.

[6]The majority of 25 innovations were adopted within the ten-year period preceding the interviews. Psychologists have estimated that for this type of data, a ten-year recall ability is not unreasonable to expect from most individuals.

[7]Sten scores were utilized to standardize these differences. See Charles H. Coates and Alvin L. Bertrand, "A Simplified Methodology for Developing Multi-Measure Indices as Research Tools," *Rural Sociology*, 20 (1955), 132–141.

[8]The data presented in Table 1 indicate that county extension agents also pass through a sort of adoption period from awareness of a new practice to the recommendation of the practice to local farmers.

Table 1. Average length of the adoption period for new farm practices

Farm practice	Average length of adoption period	% of Adopters
1. Hybrid seed corn in Iowa*	5.5 years	99
2. Improved pasture in North Carolina†	8.0 years	94
3. Growing alfalfa in North Carolina†	5.0 years	26
4. Ten farm practices in Virginia‡	3.7 years	—
5. Antibiotic swine supplements in Iowa§	1.5 years	71
6. "Miracle" fabrics by Iowa homemakers‖	1.6 years	91
7. 2,4-D weed spray in Ohio¶	1.3 years	78
8. Warfarin rat poison in Ohio¶	0.8 years	78
9. "Miracle" fabrics by Ohio homemakers¶	0.5 years	79
10. Stilbestrol by Ohio county extension agents**	2.1 years	77
11. Bulk milk tanks by Ohio county extension agents**	2.4 years	89

*Ryan and Gross, *op. cit.* (see n. 5).

†Wilkening and Santopolo, *op. cit.* (see n. 4).

‡Robert M. Dimit, "Diffusion and Adoption of Approved Farm Practices in 11 Counties in Southwest Virginia," Ph.D. thesis, Iowa State College, 1954), p. 52.

§Beal et al., *op. cit.* (see n. 1).

‖From interviews with 148 Iowa farm housewives in one community.

¶From interviews with a state-wide sample of 104 commercial farm operators and 88 farm housewives in Ohio.

**From interviews with a random sample of 44 county extension agents in Ohio. The adoption period was measured from data of awareness until date of recommendation of the new practice to local farmers. Everett M. Rogers and Dwayne Yost, *Communication Behavior of County Extension Agents* (Ohio Agr. Exp. Sta. Res. Bull. 850, Wooster, 1960).

ple, some Ohio farmers reported they adopted 2,4–D weed spray within a year of the time at which they first became aware of its existence. Other farmers reported an adoption period of nine years for this same practice (Table 2). The length of the adoption period would seem to offer some measure of the degree to which an individual shows reluctance or resistance to adoption of innovations. It likely reflects his attitudes, values, and status.

2. Innovators have shorter adoption periods than laggards. Table 3 shows the adoption period is rather consistently longer in years for each adopter category from innovators to laggards. Similar evidence has been reported by Wilkening and Santopolo[9] and by Rogers and Yost.[10]

The first farmers to adopt a new practice require fewer years to pass through the adoption period. This suggests that the first farmers to adopt a new practice do so not only because they become aware of the practice sooner than their neighbors, but because they require fewer years to move to adoption after becoming aware. Innovators perhaps gain part of their advantageous position (relative to other adopters) by learning about new practices at an earlier time, but the present data suggest that the most important

[9]*Op. cit.*, p. 31.

[10]*Op. cit.*, p. 28. For example, county extension agents who recommended bulk tanks in 1953 had an average adoption period of one year while those recommending bulk tanks in 1957 had an average adoption period of 3.7 years.

Table 2. Length of the adoption period for 2,4-D weed spray in Ohio

Length of period in years	Number	% of Adopters
Less than one	3	2.8
One	32	30.7
Two	11	10.6
Three	6	5.8
Four	9	8.7
Five	8	7.7
Six	4	3.8
Seven	1	1.0
Eight	5	4.8
Nine	2	1.9
Never adopted	22	22.2
Total	104	100.0

Table 3. Length of the adoption period by adopter category

Adopter category	Length of adoption period in years		
	2,4-D spray in Iowa*	Antibiotics in Iowa*	2,4-D spray in Ohio
Innovators	0.40	1.50†	0.22
Early adopters	0.55	0.55	0.22
Early majority	1.14	0.79	1.20
Late majority	2.34	1.52	2.14
Laggards	4.65	4.12	5.09‡

*Data from interviews with 148 Iowa farmers.

†The innovators of antibiotics constitute an exception to the otherwise consistent trend for adoption periods to increase in length from innovators to laggards. One reason may lie in the extremely small number of antibiotics innovators (N=3).

‡This category of "laggards" actually included some nonadopters of 2,4-D spray in Ohio.

reason that innovators are the first to adopt may be because they require a shorter adoption period.

Why do innovators require a shorter adoption period? Data from a statewide sample of 99 agricultural innovators in Ohio[11] indicated that their shorter adoption period may be partly due to their "research-mindedness" and strong science orientation. Thus, an innovator has more favorable attitudes toward innovations and less "behavioral inertia" must be overcome by communication stimuli. Innovators may have shorter adoption periods because they use more technically competent sources of information (42 per cent

[11]Everett M. Rogers, *Characteristics of Agricultural Innovators and Other Adopter Categories,* (Ohio Agr. Expt. Sta. Res. Bull., Wooster, in press).

traveled directly to agricultural scientists each year in Ohio) and because they place more credibility in these sources than does the average farmer. Innovators may also possess a type of mental ability that enables them to deal with abstractions. An innovator must be able to conceptualize relatively abstract information and apply this new information on his own farm. Later adopters can observe the results of innovations on other farms and may not require this ability. Rogers and Beal[12] reported a correlation of +.64 between adoption-of-farm-practices scores and a five-point rating on ability to deal with abstractions.

3. Certain factors are associated with adoption period scores. The lengths of the adoption period for each of the 25 practices for each farmer in the Ohio study were combined into an over-all measure of the adoption period by use of sten scores. Farmers with a lengthy adoption period for one innovation tended to have a relatively longer adoption period for other innovations. Many past studies have correlated personal and social factors with adoption scores, but a search of the literature disclosed no studies in which factors were correlated with adoption period scores.

Table 4. Factors associated with adoption period scores

Factor	Correlation with adoption period scores*
Farm income	−.236†
Social status	−.262‡
Size of farm in PMWU's	−.201†
Size of farm in acres	−.178
Age	+.106
Education	−.250‡
Extension contact	−.069
Acquaintance with extension agent	−.047
Knowledge about Extension Service	−.076
Contact with vo ag teacher	−.098
Favorable attitudes toward agricultural scientists	+.079
Venturesome attitudes toward innovations	−.095
Opinion leadership	−.140
Number of farm magazines read	−.103

*A higher adoption period score indicates a relatively longer adoption period.
†Significant at the 5 per cent level.
‡Significant at the 1 per cent level.

The findings in Table 4 generally indicate a lack of relationship between adoption period scores and information-seeking behavior (such as extension contract). Adoption period scores were more likely to be related to personal and social characteristics, particularly those of a socioeconomic nature such as farm income, an interviewer social status rating, and size of farm.

[12]Everett M. Rogers and George M. Beal, *Reference Group Influences in the Adoption of Agricultural Technology* (Iowa Agr. Expt. Sta. Bull., Ames, 1958 [mimeo.]), p. 73.

CONCLUSIONS

The adoption period is the length of time required for the adoption process to occur. In the present study it was measured by the number of years between awareness and adoption for an individual. Data were secured from 104 farmers in Ohio as well as from several other field studies to show that: (1) farmers vary widely (as do innovations) as to the length of the adoption period, (2) innovators have shorter adoption periods than laggards, and (3) social characteristics of farmers are generally more closely related to adoption period scores than is information-gathering behavior.

A possible shortcoming of the present study is its dependence upon recall-type data. Further research is needed on the adoption period. The eventual goal of this endeavor might be recommendations to change agents as to how they may shorten the length of the adoption process and, hence, of the diffusion process.

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Communications

ON STUDIES OF HEART DISEASE

THE writer has read with interest and appreciation Mr. Philip Enterline's review of the two bulletins, 836 and 842 of the Ohio Agricultural Experiment Station, respectively entitled: *Field Studies in Heart Disease* and *Factors Related to Heart Disease Among Ohio Farmers.* As a senior author of the first bulletin and author of the second one, I am writing to explain some of the points that seem to have been misinterpreted by Mr. Enterline.

In regard to the first bulletin, the authors were aware of the seventh revision of the *International Statistical Classification of Diseases, Injuries and Causes of Death* (ISC) published in 1957, but they were also aware of the fact that the new revision was to be used in coding 1958 data reported in 1959. The sixth revision of the ISC published in 1948 was still the latest in use in reports and projects reviewed in the bulletin.

Mr. Enterline indicates in his review that the authors, "seem to miss the point in some of the distinctions, such as in viewing the differences between a statistical classification and nomenclature as being 'simply in specificity and completeness' rather than being 'in purpose.'" A careful reader, however, can easily find the distinction in purpose explicitly stated in more than one place in the bulletin. For example, in introducing the ISC on page 5, it is stated that it "was developed by the World Health Organization for the *purpose* of standardizing the rules for coding morbidity and mortality statistics" (italics mine). It was further stated in describing the nomenclature on page 7 that "in contrast with the ISC, the New York Heart Association nomenclature was developed primarily to serve *diagnostic rather than statistical purposes*" (italics mine).

In regard to the second bulletin, the reviewer legitimately questions the absence of a discussion of two variables that showed significant correlations with arteriosclerotic heart disease (ASHD) death rates, that is, value of farm land and buildings and the proportion of tenancy. The table of correlations presented on page 24 of that bulletin indicates the consistency of these two variables with the rest of the results. The value of farm land and buildings is another indicator of farmers' economic conditions that would be expected to follow in its relationship to ASHD death rates the same pattern exhibited by other economic variables such as per cent of commercial farmers and value of farm products sold. The proportion of tenancy in Ohio is also positively

associated with indications of better economic conditions among farmers, and correlates with the percentage of commercial farmers, the value of farm products sold, and the value of farm land and buildings at .89, .80, and .76, respectively. The proportion of tenancy in Ohio is also negatively associated with factors suggested as stress-inducing, such as percentage of part time farming (—.76), milk production (—.35), and intensive farming (—.63).

Finally, the question was raised as to whether the interpretations presented were made before or after obtaining the correlation results. It should be noted that epidemiological studies are carried out on different levels and for different purposes. The analysis reported in the bulletin was aimed at the search for hypotheses through testing the nature and degree of association between heart disease death rates and several other variables. The heading "*Suggested* Interpretations and Hypotheses" (p. 25; italics mine) is self-explanatory and clearly indicates that these interpretations were made after the correlations were obtained. Mr. Enterline's question would have been appropriate if the findings had been presented as conclusive results. In this connection I would like to draw his attention to the fact that they represent a step in a pilot phase and, as carefully stated in two places in the bulletin (pp. 4, 31), they were "advanced only as hypotheses that need further investigation under more rigorously controlled conditions."

SAAD Z. NAGI

Ohio State University Health Center
Ohio State University

Edited by WALTER C. McKAIN, JR.

Book Reviews

Hoselitz, Bert F. *Sociological Aspects of Economic Growth.* Glencoe, Ill.: The Free Press, 1960. vii, 250 pp. $5.00.

In this volume the former director of the Research Center in Economic Development and Cultural Change of the University of Chicago has reprinted in more permanent form nine previously published papers. Despite the title, the "sociological aspects" receive extensive treatment in only two chapters, although they are alluded to elsewhere in discussions which frequently deal with underdeveloped countries in terms of economic theory.

On the sociological side, Hoselitz indicates that "different stages of economic development are associated with different systems, each exhibiting a particular social structure and culture." Seeking adequate categories for differentiating "the components of different social systems, each of which corresponds to a particular level of economic advancement," the author turns to Parsons' "pattern variables" somewhat modified to fit his needs. He returns to these a number of times throughout the volume.

Hoselitz sees the social aspects of economic behavior in terms of the influence of cultural values on change, the discovery of the innovators in any given society and their origin, that is, whether marginal to the culture in a sociologically identifiable way or arising "from social-structural constellations of the culture." He sees the capacity to industrialize related not only to capital supply but also to demographic factors and to the adaptability of existing formal and informal relations to a more efficient economy.

The last three chapters in the volume consider urbanization and contrast parasitic and generative cities.

It must be admitted that the book has certain drawbacks. The proofreading is poor and some of the errors clearly change the meaning intended by the author. One chapter is the summary of a 1954 conference and there are frequent references to papers not available to the reader though, of course, footnoted. Since the content is made up of papers published previously in eight different journals, there is too much repetition. Some editing and cross referencing could have eliminated most of this and improved readability. Eight of the nine papers were published between 1952 and 1955, half of them in the first two years of the period. While the theoretical considerations are still pertinent and useful, some of the material and references are

dated. A great deal of work has been done in this field in the last half decade, but as this volume was constructed there is no reference to any of it.

EDMUND DES. BRUNNER

Bureau of Applied Social Research
Columbia University

Junker, Buford H. *Field Work: An Introduction to the Social Sciences.* Chicago: University of Chicago Press, 1960. 210 pp. $5.00.

In this volume Junker analyzes a range of information-gathering roles from relatively dispassionate observation of phenomena to complete involvement in the study situation. Major stress is placed on those roles of the social scientist generally classified under the broad heading Participant Observation. The beauty of this short book is that it is neither a manual for training field workers nor an argument for one research method over another, but a sociological study of the social scientist in a learning situation. As such it is of value to all social scientists, whatever their methodological preferences may be. Hyman and others in the recent *Interviewing in Social Research*[1] have drawn attention to many technical problems in the interview. Junker's work is supplementary in that it deals with many of the same problems without being restricted to the context of survey research.

The author makes liberal use of short quotations from reports of field workers in analyzing roles appropriate to information gathering and problems involved in playing those roles. Rural sociologists engaged in extension evaluation, and others in similar positions, will be particularly interested in the explicit attention given to the "observer as participant" role in which the scientist is openly a part of the group or organization he is studying. Considerable space is devoted to the processes of learning to do field work and training for field work. For the social scientist who tends toward almost exclusive use of survey techniques, the latter sections should raise questions which tend to be swept under the rug in the rush to get interviewers into the field. The book ends with an extensive and useful bibliography, with references classified by subject matter.

FREDERICK C. FLIEGEL

Department of Agricultural Economics and Rural Sociology
The Pennsylvania State University

[1]Herbert H. Hyman et al., *Interviewing in Social Research* (Chicago: University of Chicago Press, 1954).

Knapp, Joseph G. *Seeds That Grew.* Hinsdale, N. Y.: Anderson House, 1960. xvi, 535 pp. $6.50.

Students of the co-operative movement will be pleased with this detailed history of one of the outstanding co-operatives of this country—the Cooperative Grange League Federation Exchange (the G.L.F.). Knapp has brought together materials from a variety of sources to record the development of this organization. The account is divided into five parts: I. The Rise of the G.L.F., 1900–20; II. Establishing the Idea, 1920–30; III. Developing the Enterprise, 1930–40; IV. Strengthening the Structure, 1940–50; V. Redesigning for Growth, 1950–60.

The G.L.F. is seen to have had its origin in the changing economic and social forces affecting New York State agriculture during the period preceding World War I, mediated through existing farm organizations and state agricultural agencies. In the main, however, it is the story of the individuals whose ideas and energies led the co-operative through wars, depression, prosperity, and agricultural revolution, experimentally evolving a structure that would meet the changing needs of its patrons. The role of H. E. Babcock is of necessity stressed. Emphasis is placed on the flexibility of the G.L.F., how it has not only adjusted to change but has often led in the changes. It has fostered a self-image of an innovator, tending to operate in the vanguard of both co-operative and other business organizations.

This book will be a welcome reference resource for courses in farmer co-operatives and farm organizations.

WILLIAM S. FOLKMAN

Agricultural Marketing Service
U. S. Department of Agriculture

Loomis, Charles P. *Social Systems: Essays on Their Persistence and Change.* Princeton, N. J.: D. Van Nostrand Company, Inc., 1960. xi, 349 pp. $6.50.

Organized in a series of seven related essays, this volume presents both a conceptual framework for the analysis of change in social systems and analyses of social systems. The conceptual framework, identified as the Processually Articulated Structural Model, is presented in Essay 1. Essay 2 contains an analysis of the *gemeinschaft-gesellschaft* typologies made with the PAS Model and relevant to the societies in "underdeveloped," "intermediate," and "developed" areas of the world. In Essays 3 through 7, the Model is used to analyze social systems under stress, religious social systems, the Old Order Amish, educational social systems, and social systems for health.

The PAS Model can be recognized as belonging to the continuity of Dr. Loomis' work with social systems and provides a degree of unification in perspective previously inexplicit in that work. Hence, it might rouse the discernment of the social scientist not only in his capacity as a scientist, but also in his dealings with semantics, logic, and philosophy. Although the work of the scientist, like that of the artist, is never completed, one is aware as he reads Dr. Loomis' seven related essays that the development of the PAS Model is a major accomplishment in the field of sociology.

All told, the volume is commendable as insightful, informative, systematic, and evidencing both scholarship and creativity.

IRVING A. SPAULDING

Department of Sociology
University of Rhode Island

Mommsen, Wolfgang I. *Max Weber und die deutsche Politik, 1890–1920.* Tübingen: J. C. B. Mohr (Paul Siebeck), 1959. 442 pp. Dm. 47.

This book deals with the political thinking of Max Weber, one of the sharpest adversaries of Emperor William II, whose policies he prophesied would isolate Germany and lead her to a catastrophic war. Max Weber, it is

true, insisted that for many reasons Germany should be primarily an industrial state. Nevertheless, he spent a third of his life as a collaborator in the Association for Social Politics with a special interest in rural workers. (See Paul Honigsheim, "Max Weber as Rural Sociologist," *Rural Sociology*, 11 pp. 207–218.) He violently disliked the eastern German feudals, the so-called "Junkers." To maintain their economic predominance the Junkers wanted cheap labor and for that reason hired Polish rural workers, since they had a lower living and cultural standard. Max Weber considered that this constituted a great danger for the Slavification of eastern districts of Germany. The eastern districts of Germany do not have any natural boundaries and therefore are relatively open toward Russia. Before and after the first World War, therefore, Russia appeared to him the most dangerous enemy of Germany. Primarily for this reason he emphasized during the war the building up of a Polish state in the East, independent but closely connected with Germany. Max Weber's own rural ideal was the partition of many of the large eastern estates and the establishment of middle-class farmers, which he considered the best for the economic structure of Germany.

The author of this book is himself a great-grandson of Theodor Mommsen, the famous historian of Rome, likewise an opponent of William II and a close friend of Max Weber's parents. This gave the author access to countless letters and reports of Max Weber, hitherto unknown. Moreover, he has diligently collected and correctly interpreted much inaccessible material and therefore deserves the thanks of every rural sociologist.

PAUL HONIGSHEIM

Professor Emeritus
Department of Sociology and Anthropology
Michigan State University

Nelson, Lowry. *The Minnesota Community, Country and Town in Transition*. Minneapolis: University of Minnesota Press, 1960. vii, 175 pp. $4.25.

The author, Emeritus Professor of Rural Sociology at the University of Minnesota, presents here an analysis and interpretation of Minnesota from its Indian days (before 1850) to its present industrial condition with a population of about three and a half million people. Settlement was primarily by Germans and Scandinavians, after 1848, and today its people are about one-third Lutheran, one-third Catholic and one-third mixed "other protestant" groups. The book's ten chapters begin with the land and settlement, discuss the major social institutions, and then conclude with a special analysis of the cutover region and a discussion of future trends.

The book is a "must" for the person who wishes to know the panorama of rural America. As Texas differs from New Hampshire, so does Minnesota from most of the other states of the Union in its cultural origins, its background, and its "personality." The book avoids most controversial subjects but notes new social trends of importance such as increased birth rates and "piety" during the last generation. In addition, it does an intellectual service in attempting to explain these changes in a psychosocial analysis.

From the reviewer's point of view, a lacuna of primary importance is the

lack of discussion of reforestation and the presence or lack of sustained yield timber farming in the State. The original population came from countries with the world's best records for tree farming. A discussion of what is being or could be done along these lines in Minnesota seems to the reviewer to be a very pertinent aspect of the rural sociology of the State. A somewhat similar region is upland New England. Chemical weeding of forests by the small timber farmer there promises revolutionary economic development.

CARLE C. ZIMMERMAN

Department of Social Relations
Harvard University

Stein, Maurice, Arthur Vidich, and Davis Manning White, eds. *Identity and Anxiety: Survival of the Person in Mass Society.* Glencoe, Ill.: Free Press, 1960. 658 pp. $7.50.

The meanings of our contemporary society differ, depending upon the perspective which you adopt. Some perspectives yield interesting and insightful dimensions, others tend to be more or less a reflection of the society itself: hackneyed, self-evident, but not too interesting realities. I am happy to report that *Identity and Anxiety* is not the latter; its stated aim is to avoid mirroring the clichéd-ridden, defensive, and glossy society it writes about. I believe it has succeeded.

Essentially, the book is an attempt to lay out the problem of individual identity in a mass society which tugs at this identity and threatens to dissolve it in almost every social situation in which the individual participates. In addition, the editors offer a "way out" of this not too heartening reality of our society. Although few will question the basic problem that is raised by this collection of articles, I expect there will be some controversy over the editors' solution. The recovery from loss of personal identity is sought through a return to a humanistic, intellectual, aesthetic, and historical understanding of our society—that is, the genuine appreciation which is to be derived from the classics and other intellectual experiences which yield our historical heritage and thus our identity.

The volume is introduced by an extremely perceptive article by two of the editors in which their perspective is presented. The readings are organized into three sections, the first dealing with what identity and anxiety are, the second with the major sources of identity and anxiety in our society, and the last with aesthetic, historical, and psychological sources of identity which can replace the deficient sources in our mass society.

In addition to some good but fairly obscure articles by Goffman, Radin, Gorer, I. A. Richards, and Harold Rosenberg, one might consider the additional works of Joseph Bensman and Bernard Rosenberg on bureaucracy and of Aaron Antonovsky on the Jews. The editors have drawn from a large number of schools of thought—sociology, psychology, history, and anthropology—and the more provocative literary figures in recent times—George Orwell, Paul Goodman, Harvey Swados, Irving Howe, and Dan Wakefield.

The competent sociologist will welcome this insightful approach to American society and can gain from the collection of articles a perspective from

which to examine in more detail some of the relevant features of our mass society.

PHILIP OLSON

Department of Sociology and Anthropology
University of Connecticut

BOOKS RECEIVED

Bell, W. Norman and Ezra F. Vogel. *A Modern Introduction to the Family.* Glencoe, Ill.: The Free Press, 1960. x, 691 pp. $7.50.

Berelson, Bernard. *Graduate Education In The United States.* New York: McGraw-Hill Book Co., Inc., 1960. vi, 346 pp. $6.95.

Bettelheim, Bruno. *The Informed Heart: Autonomy In A Mass Age.* Glencoe, Ill.: The Free Press, 1960. viii, 309 pp. $5.00.

Blalock, M. Hubert, Jr. *Social Statistics.* New York, Toronto, London: McGraw-Hill Book Co., Inc., 1960. xiv, 465 pp. $7.95.

Campbell, Q. Ernest. *When A City Closes Its Schools.* Chapel Hill, N.C.: Institute for Research In Social Science, 1960. v, 195 pp. $1.00.

Cloward, A. Richard and Lloyd E. Ohlin. *Delinquency and Opportunity: A Theory of Delinquent Gangs.* Glencoe, Ill.: The Free Press, 1960. xi, 220 pp. $4.00.

Durrell, Lawrence. *Prospero's Cell And Reflections On A Marine Venus.* New York: E. P. Dutton & Co., Inc., 1960. 198 pp. $5.00.

Hoeflin, M. Ruth. *Essentials Of Family Living.* New York: John Wiley & Sons, Inc., 1960. viii, 282 pp. $5.75.

Jahoda, Marie. *Race Relations and Mental Health.* Belgium: United Nations Educational, Scientific, and Cultural Organization, 1960. 48 pp. $.50.

Klapper, T. Joseph. *The Effects of Mass Communication.* Glencoe, Ill.: The Free Press, 1960. xvii, 302 pp. $5.00.

Meij, L. J. *Mechanization In Agriculture: Studies In Industrial Economics.* Chicago: Quadrangle, Inc., 1960. xi, 379 pp. $8.75.

Piazzini, Guy. *The Children of Lilith.* New York: E. P. Dutton & Co., Inc., 1960. 192 pp. $5.95.

Reiss, L. Ira. *Premarital Sexual Standards In America.* Glencoe, Ill.: The Free Press, 1960. 286 pp. $4.95.

Selvin, C. Hanan. *The Effects of Leadership.* Glencoe, Ill.: The Free Press, 1960. ix, 270 pp. $5.00.

Sheppard, D. *A Survey Among Grassland Farmers.* London: Central Office of Information, 1960. 118 pp. No price given.

Sheppard, D. *Formal Training In Agriculture.* London: Central Office of Information, 1960. 108 pp. No price given.

Sjoberg, Gideon. *The Preindustrial City Past and Present.* Glencoe, Ill.: The Free Press, 1960. xii, 353 pp. $6.75.

Tortora, Vincent R. *The Amish Folk of the Pennsylvania Dutch Country.* Lancaster, Pa.: Photo Arts Press, 1958. 30 pp. $1.00.

U. S. Department of Commerce. *Statistical Abstract of the United States 1960.* Washington: U.S. Government Printing Office, 1960. xii, 1040 pp. $3.50.

Edited by LOUIS J. DUCOFF*

Bulletin Reviews

Anastasio, Angelo. *Porthaven: A Changing Northwestern Community.* Washington State College Agr. Expt. Sta. Bull. 616; Pullman, May, 1960. 44 pp.

The purpose of this study was "to get some ideas about factors which facilitate or inhibit the adoption of improved agricultural and home-making techniques by farm families." Material is presented under six major headings: Physical Description and History (which reads like a travelogue), Family, Social Differentiation, Community Organization and Community Activities, Occupational Patterns, and Farm Families and Adoption of New Ideas. Of the total pages, 33 are devoted to the first five categories although the author does not specifically relate them at the time to the thesis under consideration. For the most part, the analysis is so general that appropriate changes in the title of the ethnic group, the period, and the geographic area would make it equally applicable to other rural communities and their environs. Reliable general propositions concerning all rural towns are of course important but an analysis of a particular community requires a greater degree of specificity and preciseness than the author of this study presents.

No explanation is given of the methodology employed in the investigation. The study is, in a sense, a proliferation of quotations by "old-timers," "newcomers," and other citizens of Porthaven, although one should be skeptical about whether they mean what they say since there appears to have been no systematic interview schedule utilized. In fact, the whole effort seems to be highly impressionistic, with no evidence that scientific research tools were used.

WARREN R. HARDEN

Department of Social Science
Illinois State Normal University

Belcher, John C., and Donald G. Hay. *Use of Health Care Services and Enrollment in Voluntary Health Insurance in Hancock County, Georgia, 1956.* Georgia Agr. Expt. Sta. Bull. N.S. 72; Athens, May, 1960. 23 pp.

———. *Use of Health Care Services and Enrollment in Voluntary*

*Assisted by Elsie S. Manny.

Health Insurance in Habersham County, Georgia, 1957. Georgia Agr. Expt. Sta. Bull. N.S. 73; Athens, June, 1960. 19 pp.

These two bulletins are properly considered together since they follow the same outline and deal with topics in a parallel manner. This is also true of an earlier publication on Greene County, Georgia. They are straightforward reports on health facilities, use of health services, selected health practices, and enrollment in voluntary health insurance. There is some attitudinal material. The principal tabular categories are sex in Habersham County and sex and color in Hancock County.

Habersham County was better supplied with physicians and dentists than Hancock County. The annual physician call rate was higher in Habersham than in Hancock County. Part of this difference could be attributed to differential use by race.

A broad definition of voluntary health insurance was used. It included disability insurance for income loss due to sickness or accidents, health care riders on life and automobile insurance policies, and benefits for specific illnesses such as polio. In spite of the broad definition the proportion enrolled was low compared with national averages.

In Hancock County there was not a clear difference between the percentage of whites and nonwhites enrolled in some sort of health insurance plan. However, nonwhites were more likely to be enrolled in marginal types of insurance programs. This points up the need for careful consideration of the quality of coverage as well as the number enrolled.

These publications should be of considerable interest to the people of the study counties. Their value for sociologists will be enhanced when they are summarized together with any other county reports that may be forthcoming in the series. There is a real need to summarize the numerous local health studies from various parts of the country and to generalize from them.

EDWARD W. HASSINGER

Department of Rural Sociology
University of Missouri

Bertrand, Alvin L., and Marion B. Smith. *Environmental Factors and School Attendance: A Study in Rural Louisiana.* Louisiana Agr. Expt. Sta. Bull. 533; Baton Rouge, May, 1960. 43 pp.

This study has as its theoretical reference the social system conceptual scheme. Using this approach it focuses on the home and school as the major social systems conditioning and motivating youth with reference to school attendance. Nine aspects of home and eight of school environment are related to school attendance. A serious question arises, however, with respect to the classification under school environment of three environmental aspects: employment of youth, youths' attitude toward a high school education, and occupational aspirations. These three environmental aspects might equally well, if not more appropriately, have been assigned to the home environment or, perhaps, to neither environment, but considered as characteristics of youth arising from both home and school environments. A more analytical

discussion of the social system orientation with attention to the interlocking nature of systems could have added clarity at this point.

One design problem presented by the study is the possible inequality involved in comparing the dropouts and the continuing students. While the study provides no direct evidence as to this inequality, it would appear from the methodological account that at the time of the interviews the Juniors and Seniors in high school and the 16- to 19-year-old dropouts could be expected to be unequal with respect to school progress, years of school experience, grades received, and organizational participation.

Irrespective of the foregoing observations, the significant differences between dropouts and continuing students are impressive. Of eighteen tests of differences concerned with home environment nine were statistically significant, and of fourteen tests concerned with school environment eight were significant. The analysis which the study undertakes of these two environments is not only timely but also yields important guide lines for attacking the dropout problem of the public schools.

FRANK D. ALEXANDER

New York State Extension Service
Cornell University

Maier, Frank H., Sheridan T. Maitland, and Gladys K. Bowles. *The Tenure Status of Farm Workers in the United States.* USDA Tech. Bull. 1217; Agricultural Research Service in co-operation with Agricultural Marketing Service; Washington, July, 1960. 91 pp.

The stated purposes of this bulletin were to describe the farm tenure situation in the United States from 1880 to 1950 and to explain the forces that yielded past conditions and trends. Available data permitted only an over-all view of the changing situation, whether national or regional. Extant data, however, are interpreted with skill and used effectively, but in many instances they are hardly adequate for the establishment of definitive relations. Many excellent unanswered questions are raised; they incite the imagination and point the way toward future analyses.

Included in the study are the factors that might have an impact on the tenure situation—disappearance of the frontier, supply of land, high capital requirements, the technological revolution, domestic and export demand, urban-rural birth rates, out-migration, rural industrialization, improved transportation, and the ups and downs of the business cycle.

In looking to the future, the following factors, among others, are considered: off-farm migration, stable and prosperous business conditions, foreign seasonal workers, and contract farming and vertical integration. The "tenure traditions," particularly that of the agricultural ladder, are re-examined, as is the relation of tenure status to the material welfare of the farm family.

Although the relation of general economic conditions to the farm tenure situation is emphasized, measures of the 1930's and later to improve the farmer's income and other activities of government to improve his well-being were not brought into focus. The existence of a depressed agriculture along-

side stable and prosperous general business conditions was not analyzed. Although great stress was placed on the role of publicly sponsored credit as a tenure-improvement measure, no mention was made of the relation of research and education to the tenure situation of family farmers. These areas also need to be examined by capable social scientists.

The bulletin contains many useful tables and charts. It is well written and is easy to grasp.

MARSHALL HARRIS

Agricultural Law Center
College of Law, Iowa City

Malan, Vernon D., and Joseph F. Powers. *The Crow Creek Indian Family.* South Dakota Agr. Expt. Sta. Bull. 487; Brookings, May, 1960. 35 pp.

This report is the first of a series concerned with the economic and social problems and improvement of the level of living of Indians on South Dakota reservations. A socioeconomic analysis was made of three communities: two representative of the "modern" (assimilating) and one representative of the "traditional" (less rapidly assimilating) groups. The criteria selected for distinguishing differences are years of education, indexes taken from Sewell's Socioeconomic Scale, and percentage of Indian blood. Classification of families in the traditional and modern community groups is made according to the indexes of acculturation and other variables. Although several references are made to the retention and abandonment of Indian cultural values, these are not described to indicate the nature or problem of acculturation.

A comparison with similar non-Indian communities suggests formal education, lack of employment opportunity, isolation and lack of transportation, and financial aid as negative factors in making a socioeconomic adjustment. The observation that formal education is not clearly a positive influence is well taken. Indian socialization of children and the impoverished social environment of the reservation offset the meaning and delimit the opportunity to practice the lessons of the school. Retention of traditional values and poor preparation to comprehend or participate in the complexities of modern society are seen as primarily impeding acculturation.

Exposure to non-Indian culture, mixed marriages—although a doubtful positive influence since dual child training practices may produce confused children—and education in a non-Indian environment are seen as significant factors conditioning Indians to enter non-Indian society with confidence. But the authors add, "Precisely what is involved in influencing these people to change their ways is not known."

The authors seem remiss in giving no attention to the historical events or the past and current policy administration as highly influential determinants of the specific course of acculturation and of present conditions. No reference is made to the number of published scientific studies, and plans for this or similar Siouan communities. A comparison might have led to new sociological insights rather than a repetition of already known factors affecting Indian socioeconomic development.

GORDON MACGREGOR

Research and Development Branch
U. S. Public Health Service

Price, Paul H., and George A. Hillery, Jr. *The Rural-Urban Fringe and Louisiana's Agriculture: A Case Study of the Baton Rouge Area.* Louisiana Agr. Expt. Sta. Bull. 526; Baton Rouge, June, 1959. 52 pp.

Hillery completed this monograph after the death of Price, who designed the original study, constructed the questionnaire, and supervised the collection of the data. This study attempts to answer the basic question: are there significant differences in household traits between rural and urban areas? Three general types of traits are examined: (1) institutional traits, which include educational, familial, and economic; (2) locational traits indicative of where social contacts take place; and (3) individual traits reflecting attitudes and values.

The findings, based on a probability area sample of 527 household members in the rural-urban fringe of East Baton Rouge Parish in 1957, generally support the well-documented fact that rural and urban differences are declining and rural areas are becoming more like their urban counterparts with respect to the general types of traits examined in this study. The only exception relates to the occupational structure of the two areas. Although Hillery states that he did not know the study's frame of reference adopted by Price before his death, he attempts to place the study in a theoretical framework, to point out the weaknesses in design, and to urge caution in interpreting the findings—a point often overlooked by less sophisticated writers.

As a descriptive study of one rural-urban fringe area of the country, the report should be read by all sociologists interested in this phenomenon. However, as a contribution to sociological theory of the development and change of rural-urban fringe areas, the study falls short. Examination of the two major hypotheses of the study (p. 4), which the junior author takes full responsibility for formulating, reveals to this reviewer a critical confusion on Hillery's part in distinguishing adequately between bland statements of general principles and precisely stated hypotheses capable of empirical verification.

JOHN R. WALKER

Department of Sociology
University of Washington

Rogers, Everett M., and Harold R. Capener. *The County Extension Agent and His Constituents.* Ohio Agr. Expt. Sta. Res. Bull. 858; Wooster, June, 1960. 43 pp.

In this bulletin research is based on data from interviews with a state-wide probability sample of 104 commercial farmers. The authors use an extension contact scale in analyzing the relationships between contact with the county extension agent and (1) personal characteristics of the farm operator, (2) characteristics of the farm, (3) farmers' communication behavior, and (4) their farm practice adoption behavior. Simple linear correlation analysis is used to test the significance of the relationships.

The findings should be helpful to anyone concerned with extension education as well as those interested in communication of agricultural information or in farmers' information-seeking behavior. The authors do not stop with reporting their findings, but accept the researcher's responsibility of pointing out the implications of their research.

One of the most interesting and unique contributions of this research is the exploration of farmers' direct *versus* indirect contact with extension. The purpose is to see if extension agents are reaching small or low-income farmers indirectly through other farmers who serve as adoption leaders. The conclusion that there are very few farmers reached through indirect contacts who are not also reached by direct contacts should provide food for serious thought for the many extensioners who say they reach the hard-to-reach farmers through leaders.

The authors accept rather unquestioningly the Fisher-Yates type test of whether a correlation coefficient is significantly different from zero in judging the significance of relationships. This leads them, for example, to the conclusion that there are significant relations between several variables and extension contact even though the coefficients are as low as .21. Utilizing the standard error of b in obtaining a t statistic would have provided greater insight into the statistical significance of the relationships. And statistical evidence ought to be combined with both theoretical and practical considerations before conclusions are drawn as to whether or not meaningful relationships exist.

JAMES NIELSON

Department of Agricultural Economics
Michigan State University

Tarver, James D., and Jeanie Hill. *IBM 650 Program Instructions for Making State, County, and City Population Projections by the Component Method.* Oklahoma Agr. Expt. Sta. Processed Series P-353; June, 1960. 40 pp.

Eight IBM 650 programs are described which can be used to compute July 1, 1965, 1970, 1975, and 1980 population projections. The programs utilize projected age-specific birth, death, and net migration rates which yielded the age-sex-race population characteristics outlined in "A Component Method of Estimating and Projecting State and Subdivisional Populations" (Misc. Pub. MP-54) and the detailed data in "Projections of the Population of Oklahoma to 1970" (Bull. B-545).

With the descriptions contained herein, with Miscellaneous Publication MP-54 which outlines the successive computational steps, and with listings of duplicate sets of the program cards (which the authors offer to make available on request), much time and labor can be saved by other researchers developing projections for a state and its subdivisions. Each researcher must, however, make explicit assumptions regarding the three components of population change during the projection periods.

Programs I–V establish alternative sets of rates for each component and have been designed to permit numerous variations. Programs VI and VIII are the population routines and Program VII projects births. Operating instructions, console settings, card input and output designs, and other pertinent information are included.

The programs are ingeniously designed, and the bulletin will be welcomed

by other population research workers. The authors are to be commended for making the descriptions available in this form.

GLADYS K. BOWLES

Agricultural Marketing Service
U. S. Department of Agriculture

OTHER PUBLICATIONS RECEIVED

Abma, E. *Boer En Cooperatie In Nederland Deel I—De Cooperatieve Gezindheid* (Farmers' Attitudes towards Cooperatives). Bull. 4; Afdeling Sociologie En Sociografie Van De Landbouwhogeschool, Wageningen, 1956. 62 pp.

————. *Boer En Cooperatie In Nederland Deel II—Cooperatieve En Niet—Cooperatieve Boeren* (Factors Influencing Farmers' Attitudes Towards Cooperatives). Bull. 12; Afdeling Sociologie En Sociografie Van De Landbourwhogeschool, Wageningen, 1958. 62 pp.

Ashikaga, Tomomi. *Agricultural Cooperative Associations in Japan.* Agriculture, Forestry and Fisheries Productivity Conference, Agricultural Development Series 6; Tokyo, 1959. 74 pp.

Baird, Andrew W., and Wilfrid C. Bailey. *Community Development Clubs in Alcorn County, Mississippi.* Mississippi Agr. Expt. Sta. Bull. 597; State College, May, 1960. 26 pp.

Bauder, Ward W. *Iowa Farm Operators' and Farm Landlords' Knowledge of, Participation in and Acceptance of the Old Age and Survivors Insurance Program.* Iowa Agr. Expt. Sta. Res. Bull. 479; Ames, June, 1960. 20 pp.

Beal, George M., and Everett M. Rogers. *The Adoption of Two Farm Practices in a Central Iowa Community.* Iowa Agr. Expt. Sta. Special Rpt. 26; Ames, June, 1960. 20 pp.

Black, Therel R., Carmen Fredrickson, and Sheridan T. Maitland. *Rocket Age Industrialization of Box Elder County.* Utah Agr. Expt. Sta. Bull. 420, in co-operation with Agricultural Marketing Service, USDA; Logan, 1960. 23 pp.

Bolton, Bill. *Income and Related Characteristics of Rural Households in the Central Louisiana Mixed Farming Area.* Louisiana Agr. Expt. Sta. D.A.E. Cir. 257; in co-operation with Agricultural Research Service, USDA; Baton Rouge, Mar., 1960. 91 pp.

Cowhig, James, Jay Artis, J. Allan Beegle, and Harold Goldsmith. *Orientations Toward Occupation and Residence. A Study of High School Seniors in Four Counties of Michigan.* Michigan Agr. Expt. Sta. Special Bull. 428; East Lansing, 1960. 34 pp.

Dawson, George R. *Preliminary Investigation of Farm Labor Conditions in New Mexico.* New Mexico Agr. Expt. Sta. Res. Rpt. 41; University Park, Apr., 1960. 78 pp.

Edlefsen, John B., and Martin Jay Crowe. *Teen-agers' Occupational Aspirations.* Washington Agr. Expt. Sta. Bull. 618; Pullman, July, 1960. 24 pp.

Frey, John C., H. K. Dansereau, R. D. Pashek, and James W. Markham. *The Economic and Social Impact of Highways. A Progress Summary of*

the Monroeville Case Study. Pennsylvania Agr. Expt. Sta. Prog. Rpt. 219; University Park, June, 1960. 36 pp.

Hamilton, C. Horace. *Distribution and Characteristics of Physicians in Wisconsin. A Source Book of Tables.* Dept. of Rural Sociology, Univ. of Wisconsin, Madison, Sept., 1960. 82 pp.

———. *Hospitals and Hospital Service in Wisconsin. A Source Book of Tables.* Dept. of Rural Sociology, Univ. of Wisconsin, Madison, Sept., 1960. 66 pp.

———. *Health and Health Services in the Southern Appalachians. A Source Book.* North Carolina Agr. Expt. Sta. Prog. Rpt. RS-35; Raleigh, Sept., 1959. 105 pp.

Hirzel, Robert K., and William E. McDaniel. *The People of Delaware. Where We Live, How We Have Grown, Our Characteristics.* Delaware Agr. Expt. Sta. Bull. 331 (Tech.); Newark, Sept., 1960. 23 pp.

Kanel, Don. *Opportunities for Beginning Farmers, Why Are They Limited?* Nebraska Agr. Expt. Sta. Bull. 452; (North Central Regional Publication 102) Lincoln, May, 1960. 27 pp.

Kreitlow, Burton W., Lowell Pierce, and Curtis Middleton. *Who Joins 4-H Clubs? An Analysis of the School and Home Backgrounds of 4-H Club Members and Non-Members in Wisconsin Communities.* Wisconsin Agr. Expt. Sta. Res. Bull. 215; Madison, Oct., 1959. 24 pp.

Loftin, Marion T. *Mississippi's Older People.* Mississippi Agr. Expt. Sta. Bull. 599; State College, June, 1960. 16 pp.

Nelson, Bardin H. *Attitudes of Youth Toward Occupational Opportunities and Social Services in a Six-County Area of the Blacklands.* Texas Agr. Expt. Sta. Bull. 953; College Station, Apr., 1960. 10 pp.

Nielson, James, and William Crosswhite. *The Michigan Township Extension Experiment: Changes in Agricultural Production, Efficiency, and Earnings.* Michigan Agr. Expt. Sta. Tech. Bull. 274; East Lansing, Oct., 1959. 48 pp.

Pennsylvania Council of Churches and Pennsylvania State University. *Churches Serve the Changing Community.* Proceedings of the Conference on Church and Community, July 5–8, 1960. University Park, Penn.

Ranney, W. P. *The Labor Force on Tennessee Farms.* Tennessee Agr. Expt. Sta. Bull. 304; Knoxville, Oct., 1959. 35 pp.

Reuss, L. A., and K. M. Gilbraith. *Resource Characteristics and Utilization and Level of Living Items, Rural Households, North and West Florida, 1956.* Florida Agr. Expt. Sta. Agr. Econ. Mimeo. Rpt. 60–11, in co-operation with Agricultural Research Service, USDA; Gainesville, Mar., 1960. 130 pp.

Rogers, E. M., and R. L. Pitzer. *The Adoption of Irrigation by Ohio Farmers.* Ohio Agr. Expt. Sta. Res. Bull. 851; Wooster, June, 1960. 46 pp.

Rogers, E. M., and M. D. Yost. *Communication Behavior of County Extension Agents.* Ohio Agr. Expt. Sta. Res. Bull. 850; Wooster, Feb., 1960. 38 pp.

Saunders, Fred B. *Economic Analysis of Part-Time Farming in Georgia.* Georgia Agr. Expt. Sta. Bull. N.S. 65; Athens, Dec., 1959. 54 pp.

Smith, R. S., and S. W. Warren. *Father and Son Arrangements on the Farm.* Cornell Univ. Ext. Bull. 892; rev., June, 1960. 32 pp.

Tarver, James D. *County Population Trends in Oklahoma, 1950–59.* Oklahoma Agr. Expt. Sta. Processed Series P-351, Stillwater, May, 1960. 19 pp.

U. S. Department of Health, Education, and Welfare, and U. S. Department of Labor. *Domestic Agricultural Migrants in the United States. Counties Estimated to Have 100 or More at Peak of Normal Crop Season.* Public Health Serv. Publ. 540; Washington, D. C. rev. 1960 (map, n.p.)

U. S. Office of Education. *Summaries of Studies in Agricultural Education: An Annotated Bibliography of Studies in Agricultural Education with Classified Subject Index.* U. S. Off. Educ. Vocat. Div. Bull. 282; Washington, D. C., 1960. 90 pp.

Edited by MARION T. LOFTIN

News Notes

COLLEGES AND UNIVERSITIES

Cornell University

W. A. Anderson, who has been a member of the staff since 1931, became professor emeritus on June 30, 1960.

John Harp, formerly at Iowa State University, joined the staff August 1 as assistant professor. In addition to teaching, he will develop research related to farmer co-operatives and other farm organizations.

Ray E. Wakeley, Iowa State University, has been appointed as visiting professor for the year beginning October 1, 1960. He will be working on a community sampling study which has been initiated.

While on sabbatic leave during the fall term, Gordon J. Cummings will be making a community study related to program development in extension.

C. E. Ramsey is on sabbatic leave during 1960–1961, serving as research consultant in the Puerto Rico Agricultural Experiment Station.

Emmit F. Sharp was a member of an interdisciplinary group invited to participate in a faculty seminar on metropolitan research at Maxwell Graduate School, Syracuse University, August 28–September 7.

Drew University, Madison, New Jersey

Davis M. Graybeal, Associate Professor of Church and Society and Director of Field Work at the Theological School of Drew University, participated in a Ford Foundation faculty summer research seminar in consumer economics at the University of Pennsylvania Wharton School of Finance.

Before joining the Drew faculty in September 1956, Graybeal was chaplain and associate professor of religion at Emory and Henry College in Emory, Virginia, for four years. He is a native of Radford, Virginia; he did his undergraduate work at Emory and Henry College, was awarded the Bachelor of Divinity degree at Yale Divinity School, and the Ph.D. at Yale Graduate School. He heads the fieldwork program at Drew which supplements classroom work by giving experience in practical church situations.

Glenville State College, Glenville, West Virginia

President Harry B. Heflin announces the addition to the faculty of Andrew W. Baird. Baird holds the B.S. and M.S. degrees from Mississippi State Uni-

versity and is a native of Mississippi. He was employed for several years at Mississippi State University, first as graduate assistant and later as an assistant sociologist in the Division of Sociology and Rural Life. His research has been centered around rural development programs and has resulted in the publication of a number of articles, bulletins, and pamphlets. His work will include courses in rural sociology, area work in rural development, and community planning.

University of Kentucky

George A. Hillery, Jr. has been appointed assistant professor in the Departments of Sociology and Rural Sociology. He holds the Ph.D. from Louisiana State University and came to Kentucky after a year as a postdoctoral fellow at the University of Florida.

Joseph H. Mangalam, formerly of the University of Panjab, Pakistan, joined the Department of Rural Sociology as an assistant professor. He holds the Ph.D. degree from Cornell University.

Willis A. Sutton, Jr. has returned from India after a year's leave of absence during which he served as a Ford Foundation research consultant with the Indian Government's Ministry of Community Development and Co-operation.

Howard W. Beers, on indefinite leave from the university and serving as field associate in community development and extension education for the Council on Economic and Cultural Affairs, visited the departments while on home leave from Indonesia.

James S. Brown received a grant from the National Institute of Mental Health to do a restudy of the Beech Creek neighborhood in the Kentucky mountains. Joining him in the study are Harry K. Schwarzweller, Joy M. Query, and Joseph J. Magalam.

James W. Gladden is a member of the special committee named by the Commission for Democracy in Education, National Education Association, which is investigating the educational system of Levittown, New York.

Jiri Kolaja has recently published *A Polish Factory: A Case Study of Workers' Participation in Decision Making* (University of Kentucky Press).

E. Grant Youmans, USDA representative stationed at Kentucky, is completing a study of the health status, socioeconomic conditions, and leisure-time activities of older persons in rural and urban Kentucky.

Thomas E. Ford has been promoted to the rank of professor. He also serves as executive director of the Social Research Service and continues as director of general research for Southern Appalachian Studies.

John C. Ball and Sidney J. Kaplan have been promoted to associate professorships.

Marian Pearsall has transferred to the newly dedicated medical school where she is an associate professor of behavioral science and an associate professor of rural sociology. She is also co-ordinator of behavioral science for the College of Nursing.

Gordon DeJong and Jon Young have been awarded Kentucky Research Foundation Fellowships. The following students hold graduate assistantships in the departments: Winfield Belgard, John J. Crowden, Jay Crowe, Bruce M. John, N. B. Patel, and Ali Paydarfar. Bruce Mayhew has an under-

graduate assistantship. Ronald Enroth has a graduate assistantship in the Department of Behavioral Science, College of Medicine. Abdul Awwad of Amman, Jordan, and Lytton Guimaraes of Rio de Janeiro, Brazil, are studying in the department under the auspices of the International Co-operation Administration. Emi Naniwa of Tokyo, Japan, is pursuing a graduate program under a foreign student scholarship.

Joy M. Query and Herbert Aurbach completed requirements for the Ph.D. degree during the summer of 1960.

Mississippi State University

George L. Wilber and Wilfrid C. Bailey have been promoted from the rank of associate professor to professor. Gerald O. Windham has been promoted to an assistant professorship.

J. H. Bruening resigned to accept a position with the Department of Sociology and Anthropology, University of Mississippi.

Elisabeth Stojanovic, B.A., Mississippi State University, was appointed research assistant. William Stacy and Vaughn L. Grisham, both holding the B.A. degree from Mississippi State University, are graduate research assistants. Gerald Globetti, B.S., Louisiana College; Carlton R. Sollie, B.A., Millsaps College; and Kenneth P. Wilkinson, B.A., Louisiana College, are graduate teaching assistants.

Ohio State University

Carl C. Taylor, consultant to the Ford Foundation Program in India, served as visiting professor in rural sociology during the 1960 summer session. Taylor instructed a course in advanced rural sociology and an advanced seminar in the sociology of underdeveloped areas. He also worked on the manuscript for a book on the sociology of underdeveloped areas.

A. R. Mangus, Professor in Rural Sociology, was a visiting professor at the University of California, Berkeley, during the 1960 summer session.

Harold R. Capener, Associate Professor of Rural Sociology, recently returned from a two-year assignment on the staff of the Ludiahana Agricultural College, Punjab, India, as part of the ICA-India contract. He has now returned to India for another assignment at Ludiahana.

Mervin G. Smith, department Chairman, returned in July from a six-month appointment on the staff of the Center for Economic and Agricultural Adjustment, Ames, Iowa. He is editing a book on agricultural adjustment to be published by the Iowa State University Press.

New graduate students in rural sociology are Dave Cartano from Iowa State University; Saied Shishtaway, University of Cairo; Amorn Srilikit, Thialand; and Arthur Jaffee, William Flinn, Donald Thomas, and Keith Bandy, Ohio State University. There are now approximately 25 graduate students in rural sociology.

Oregon State College

John G. Curry, for the past three years on the staff of Eastern Washington College of Education, has joined the staff as instructor.

Washington State University

Walter L. Slocum resumed his duties as professor and chairman of the Department of Rural Sociology at Washington State University on Sep-

tember 16, 1960. He was in Pakistan for two years as professor of sociology at the University of Punjab under the Washington State University Inter-College Exchange Contract. John B. Edlefsen, who served as acting chairman for the Department of Rural Sociology during Slocum's absence, is now in Pakistan.

University of Wisconsin

New faculty members in rural sociology are Keith Warner, Cornell University, and Donald Johnson, formerly a student in the department. Both have been appointed as assistant professors and will combine teaching and research duties.

ANNOUNCEMENTS

The Social Science Section, Department of Cultural Affairs of the Pan-American Union will resume publication of its journal in January, 1961. The last issue appeared in December, 1956 (Vol. 7, No. 49). This second series of the *Revista Interamericana de Ciencias Sociales* will be guided by the same principles which characterized the earlier one. Published in Spanish, it will set forth the new lines of development in anthropology, economics, history, political science, psychology, and sociology, and give special attention to those social sciences as they apply to socioeconomic and cultural development in Latin America.

Revista invites information regarding professional activities. Contact Luis Olivos, Social Science Section, Rural Sociological Society, Pennsylvania State College, State College, Pennsylvania.

The first issue of the *Journal of the East Pakistan Academy for Village Development* was published in April, 1960. This journal will be published bi-monthly.

Interested persons should contact Serajul Islan, Editor, The East Pakistan Academy for Village Development, Commila, East Pakistan.

REPORT OF EDITOR AND MANAGING EDITOR OF *RURAL SOCIOLOGY*

The following combined report embraces the financial statement of the Managing Editor, the editors' statements, and a statement of the action of the Board of Editors.

The financial statement of RURAL SOCIOLOGY (see below) shows actual receipts and expenditures as of July 31, 1960, together with an estimate for the last half of the year. Owing to increased membership subscription and subsidy for the special March issue, the financial position of the journal is favorable. The balance for 1960 is approximately $1,633 higher than for a year ago.

The backlog of manuscripts accepted and in process is the largest in the history of the journal. At the time of this report, the December 1960 issue has been made up. In addition, twelve papers and three research notes have been accepted, twenty have been returned to authors for revision, and fifteen are currently in process. For various reasons, the flow of papers being submitted to RURAL SOCIOLOGY has increased markedly in the past six months.

The editor announced a special supplement to the June 1960 issue comprising a bibliographic essay concerning sources relevant to the U.S.–Mexican Border area. This supplement, which will be received by all members and subscribers, was made possible at no cost to the journal through projects directed by Charles P. Loomis.

An account of action and discussion from the Board of Editors meeting follows. (1) The Board voted unanimously to support liaison of the Editor and Managing Editor of the journal with the Executive Committee and the Program Committee of the Society. (2) The Board voted unanimously to recommend that the President of the Society appoint a committee to study the possibility of restructuring the offices of editor and managing editor, and to explore possibilities for publishing the journal when the Cornell agreement expires in 1962. Further, it is the intent of this recommendation that recommendations for action be brought before the next annual meeting. (3) The Board voted to continue all departmental editors for another year. Also the three-year term of the editor, which expires in February, 1961, was extended until the next annual meeting. (4) The Board discussed the advantages and disadvantages of adopting a more simplified system of footnoting; discussion of alternatives in handling the backlog problem ensued. No action was taken on either of these issues.

J. ALLAN BEEGLE
Editor

MIDYEAR 1960 FINANCIAL STATEMENT
RURAL SOCIOLOGY

	Actual as of July 31, 1960	Estimate for last half of year
RECEIPTS		
1960 membership subscriptions	$ 3,776.50	$ 0
1960 subscriptions paid in 1959	3,259.51	0
1960 subscriptions paid in 1960	2,155.30	350.00
Reprint sales (paid)	270.95	485.00
Reprint sales (unpaid)	191.02	0
Advertising (paid)	74.37	0
Advertising (unpaid)	63.75	0
University Microfilms royalty	6.40	0
Title for back issues	750.00	0
Subsidy for March 1960 Supplement	2,358.65	0
Miscellaneous	345.30	0
Total receipts	$13,251.75	$835.00
Total	$14,086.75	
EXPENDITURES		
Printing and engraving	$5,040.78	$3,000.00
Mailing costs of journal	121.68	85.00
Printing reprints	379.61	235.00
Editing costs	270.00	250.00
Copyright	8.00	8.00
Secretarial help	1,000.00	
Managing Editor's postage	103.03	75.00
Other editors' postage	20.00	20.00
Communications	22.61	20.00
Stationery and supplies	213.35	
Miscellaneous	18.75	15.00
Total expenditures	$7,197.81	$3,708.00
Total	$10,905.81	
Total receipts	$14,086.75	
Total expenditures	10.905.81	
Balance	.$3,180.94	

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The object of the Rural Sociological Society is to promote the development of rural sociology through research, teaching, and extension work.

Membership is open to any person professionally employed in the field of rural sociology or who is interested in the objects of the Society, subject to the approval of the Executive Committee and the payment of annual membership fee of $7.50. The student membership and emeritus fee is $4.00 annually. Each member receives RURAL SOCIOLOGY, the official journal of the Society, at no additional expense. Send membership fees to:

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   Roland L. Warren, "Toward a Reformulation of Community Theory," *Human Organization*, XV (Summer, 1956), 8–11.

   Use month, season, or number only when needed because periodical is not paged consecutively throughout a volume. Month or season is preferred to number.

   Charles R. Hoffer and Walter Freeman, *Social Action Resulting from Industrial Development* (Michigan State University Agr. Expt. Sta. Bull. 401; East Lansing, 1955), p. 4.

   T. Lynn Smith, *The Sociology of Rural Life* (3d ed.; New York: Harper, 1953), pp. 377–379.

   U.S. Bureau of the Census, *U.S. Census of Population, 1950*, Vol. II, *Characteristics of the Population, Part 1: United States Summary*, pp. 27–28 (Washington: Government Printing Office, 1953).
4. In Spanish and French book and article titles only the first word and proper names should be capitalized.
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